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# Native Soft Mast of East Texas and the Western Coastal Plain

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United States Department of Agriculture  
Natural Resources Conservation Service

East Texas Plant Materials Center

Helping People Help the Land



## Helping People Help the Land

Fleshy fruit (soft mast) is a key food resource for many game and nongame wildlife species. Most species of birds and mammals consume fruit at least occasionally. Fruit consumption has been linked to mammalian survival and reproductive success. Abundant fruit in young forests may be a particularly important high-energy food source for neotropical migratory birds during fall migration. During winter, soft mast is important to many vertebrates when other food resources are scarce. Land managers need to know how fruit availability varies among forest types and age-classes, seasonally, and over time as forests mature.

*Source: USDA Forest Service Southern Research Station [www.srs.fs.usda.gov](http://www.srs.fs.usda.gov).*

The plants featured in this publication are common to the East Texas Plant Materials Center's service area, and are utilized by multiple species of wildlife: from large mammals to migrant, neotropical birds. They were selected to provide overlapping periods of soft mast availability throughout the course of the year. Some species have improved cultivars developed by the Plant Materials Program and other agencies, and most, if not all, are available from commercial sources.



Red Mulberry

*Morus rubra* L.



Mayhaw

*Crataegus aestivalis*  
(Walter) Torr. & A. Gray



Andy and Sally Wadewski,  
Lady Bird Johnson Wildflower Center



Southern Dewberry

*Rubus trivialis*



Common Service Berry

*Amelanchier arborea*  
(Michx. f.) Fernald



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*Rubus argutus* Link



Growth Form	Tree	Tree	Perennial Vine/Subshrub	Shrub/Tree	Perennial Vine/Subshrub
Bloom Color	Greenish White	White	White	White	White
Fruit Color	Red to Dark Purple	Red	Deep Purple	Red to Purple	Deep Purple
Fruiting Period	April–May	April–May	April–May	May–June	May–July
Height (ft)	up to 70	up to 25	2 to 4	up to 36	up to 8
Soil Types	Fine   Medium   Coarse	Medium	Medium   Coarse	Medium   Coarse	Fine   Medium   Coarse
Drought Tolerance	Medium	Low	Medium	Low	Medium
Fire Tolerance	Low	Low	Medium	Medium	Medium
Fertility	Low	Medium	Medium	Medium	Low
Light Requirement					
Propagate	Cutting   Seed   Bare Root	Bare Root   Seed	Sprig   Seed   Cutting Bare Root	Cutting   Seed   Bare Root	Sprig   Seed   Cutting Bare Root

Remarks	Recognizable by having both ovate and mitten shaped leaves, it is one of the earliest soft mast producers. Fruit is born on female trees only and drops quickly when ripe. The fruit is utilized by a wide array of birds and mammals and has a tart, pleasant taste.	Mayhaw is best known for jellies made from its fruit. It is typically found in low lying areas that flood seasonally. Its fruit is utilized by birds and mammals, and the dense thickets of thorny branches make excellent cover for game animals.	Dew berries are one of the earliest rubus species to ripen, and are utilized by nearly all animals of the forest. Deer browse young stems and they provide excellent cover for quail chicks. This species can be identified by its red, bristly, hair-like thorns.	The fruit is utilized by over 40 species of birds. Mammals such as deer, bear, fox, racoon, and coyotes also take advantage of the fruit when it is available. It, along with pawpaw, is one of the few truly shade tolerant soft mast producers.	Utilized the same as dew berries by wildlife, blackberries can be differentiated by their cat-claw-like thorns. They form dense thickets in open areas such as cut overs. Berries of the rubus genus are excellent for fresh eating, jellies, and desserts.
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Mustang grape

Black Cherry

Elderberry

Chickasaw Plum

Muscadine

*Vitis mustangensis*  
Buckley

*Prunus serotina* Ehrh.

*Sambucus nigra* L. ssp.  
*canadensis* (L.)

*Prunus angustifolia*  
Marshall

*Vitis rotundifolia* Michx.



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Growth Form	Perennial Vine	Tree	Shrub	Shrub/Tree	Perennial Vine
Bloom Color	Green to White	White	White	White	White
Fruit Color	Deep Purple	Black	Blue to Purple	Red	Pale to Deep Purple
Fruiting Period	June–July	June–Oct.	July–Aug.	July–Oct.	Aug.–Sept.
Height (ft)	up to 30	up to 80	up to 7	up to 12	up to 30
Soil Types	Medium   Coarse	Medium   Coarse	Medium	Medium   Coarse	Fine   Medium
Drought Tolerance	Medium	Medium	Medium	Low	Medium
Fire Tolerance	Medium	Low	Medium	Medium	Low
Fertility	Medium	Medium	Medium	Medium	Medium
Light Requirement					
Propagate	Cutting   Seed   Bare Root	Seed   Bare Root	Seed   Bare Root	Seed   Bare Root	Cutting   Seed   Bare Root

#### Remarks

This is our earliest ripening native grape. The foliage is highly palatable and fruits are utilized by white-tailed deer, bear, foxes, coyotes, raccoons, opossums, and turkey. Fruit production is more prolific than seen in most muscadines and larger in size than summer grape.

Fruit is heavily utilized by birds and mammals. White-tailed deer browse the foliage of young plants. The leaves and inner bark contain cyanogenic glycoside which can lead to cyanide poisoning in livestock. The fruit can be used to make jellies.

Native Americans used this species for food and tools. Berries are utilized by black bear, white-tailed deer, turkey, small mammals, and birds. The foliage is more palatable in fall. Berries are an excellent source of vitamin C. **Caution: Species with red berries are toxic.**

This species provides cover for wildlife by forming dense thickets. It thrives on sandy sites and produces small fruits utilized by nearly all wildlife. The foliage is browsed occasionally by white-tailed deer and the fruits make excellent jellies.

Utilized in similar fashion as mustang grapes by wildlife, muscadines are thicker skinned with a distinct flavor. They may be eaten fresh or used in jellies. Grape vines store large amounts of fresh water that may be utilized in emergency situations for survival.

The Natural Resources Conservation Service's (NRCS) Plant Materials Program is comprised of a nationwide network of 27 centers that seek to solve natural resource problems through the use of native plants. Scientists at plant materials centers work to support NRCS field office operations through the development of plant based technologies that can be applied to conservation practices and standards. Texas has three plant materials centers located in Nacogdoches, Kingsville, and Knox City which work cooperatively with state and federal agencies, commercial businesses, and seed and nursery associations.

Plants selected by the Plant Materials Program have been used to develop biomass for biofuel production, sequester carbon from the atmosphere, reduce erosion, restore wetlands and other disturbed critical areas, improve water quality through the protection of riparian areas and uptake of nutrient runoff from agricultural sites, restore coastal dunes, and improve wildlife habitat. The Plant Materials Program is adaptable and ever evolving to meet new conservation challenges as they emerge.







Sassafras

Farkieberry

Black Gum

Honey Locust

Common Persimmon

*Sassafras albidum*  
(Nutt.) Nees

*Vaccinium arboreum*  
Marshall

*Nyssa sylvatica* Marshall

*Gleditsia triacanthos* L.

*Diospyros virginiana* L.



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Growth Form	Shrub/Tree	Shrub/Tree	Tree	Tree	Tree
Bloom Color	Yellow	White	Green	Yellow	Yellow
Fruit Color	Deep Blue to Black	Deep Blue to Black	Deep Blue to Black	Dark Brown Bean Pods	Orange
Fruiting Period	Sept.–Nov.	Sept.–Nov.	Sept.–Nov.	Sept.–Dec.	Oct.–Jan.
Height	up to 75	up to 30	up to 100	up to 70	up to 60
Soil Types	Medium   Coarse	Medium to Coarse	Medium to Coarse	Fine to Medium	Fine to Coarse
Drought Tolerance	High	Medium	Low	High	Medium
Fire Tolerance	Low	Medium	Low	Medium	Medium
Fertility	Low	Low	Medium	Medium	Medium
Light Requirement					
Propagate	Seed   Springs   Bare Root	Seed   Bare Root	Cutting   Seed   Bare Root	Cutting   Seed   Bare Root	Cutting   Seed   Bare Root

## Remarks

Fruit is used by deer, turkey, bear, coyotes, racoons, and birds, and foliage is a medium preferred browse. Portions of this plant have been used as flavorings and spice. **Caution:** It contains safrole and has been linked to liver damage and cancer.

Also called sparkleberry or huckleberry, this is the largest member of the blueberry family. The fruits are utilized by birds and mammals, and the foliage is a medium preferred browse. Some individual trees bear copious amounts of tart, pithy fruit.

Many animals utilize the fruit including black bear, deer, and wild turkey. There are male and female trees with only females producing fruit. Foliage is highly palatable to deer, and turns a brilliant red in the fall making it excellent for landscaping.

Deer browse the foliage, and utilize the sweet smelling seed pods heavily in the fall. It provides excellent cover. **Caution:** Honey locust spreads rapidly, and has thorns capable of puncturing tires and boots. Thornless cultivars are available.

Persimmons hold fruit into winter when other soft mast is not available. Fruits are relished by white-tailed deer and other mammals. Fruit drops well after leaves shed and is very asbringent until after first frost. Only female trees bear fruit.



American Beautyberry

*Callicarpa americana* L.



Growth Form

Perennial Shrub

Bloom Color

White Pink Purple

Fruit Color

Vivid Bright Purple

Fruiting Period

Aug.–Oct.

Height (ft)

up to 6

Soil Types

Fine | Coarse

Drought Tolerance

High

Fire Tolerance

High

Fertility

Low

Light Requirement



Propagate

Seed | Bare Root

Remarks

Berries are utilized by birds, deer, and other mammals. The foliage is highly palatable to browsers and acts as an insect repellent when crushed and rubbed on the skin. It is one of our most important wildlife plants providing browse, soft mast, and cover.



Summer Grape

*Vitis aestivalis* Michx.



Perennial Vine

Green

Deep Purple to Black

Aug.–Oct.

up to 30

Medium | Coarse

High

Low

Medium



Cutting | Seed | Bare Root

Like all grape species, the foliage is palatable to browsers, but may grow out of reach in heavily browsed areas. The grapes of this species are much smaller than muscadines and are utilized by birds and mammals alike. Fruit is tart with little pulp.



Pawpaw

*Asimina triloba* (L.)

Dunal



Shrub/Tree

Purple to Burgandy

Green

Sept.–Oct.

up to 25

Medium | Coarse

Low

Medium

High



Seed | Bare Root

Pawpaw is a unique fruit in the custard apple family. It has a banana-like texture and taste, and is utilized by white-tailed deer, black bear, raccoons, opossum, coyote, and fox. It favors moist, fertile soils, and will grow in full shade where other species may struggle.



Flowering Dogwood

*Cornus florida* L.



Andy and Sally Wasowski,  
Lady Bird Johnson Wildflower Center

Shrub/Tree

White to Pink

Bright Red

Sept.–Oct.

up to 30

Medium | Coarse

Low

Medium

Medium



Cutting | Seed | Bare Root

Dogwood provides medium quality browse, but its fruits are high in fat and calcium. They are utilized extensively by birds, including wild turkey. Small mammals, bear, and deer also use the fruits heavily. The wood is exceptionally hard.



Southern Crabapple

*Malus angustifolia*  
(Aiton) Michx.



Shrub/Tree

White to Pink

Yellow to Red

Sept.–Nov.

up to 30

Fine | Coarse

High

Low

Medium



Seed | Bare Root

Crabapple trees typically produce large amounts of fruit that cling to the tree well into early winter. The leaves are a high quality browse, and the fruits are relished by nearly every animal in the forest. Improved varieties are commercially available.



## East Texas Plant Materials Center



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### Additional Resources

Quail Unlimited | [www.qu.org](http://www.qu.org)

NRCS Plants Database | [www.plants.usda.gov](http://www.plants.usda.gov)

Texas Parks & Wildlife | [www.tpwd.state.tx.us](http://www.tpwd.state.tx.us)

National Wild Turkey Federation | [www.nwtf.org](http://www.nwtf.org)

Quality Deer Management Association | [www.qdma.com](http://www.qdma.com)

USDA Forest Service Southern Research Station | [www.srs.fs.usda.gov](http://www.srs.fs.usda.gov)