

HONEY LOCUST

Gleditsia triacanthose L.

Plant Symbol = GLTR

Contributed By: USDA NRCS National Plant Data
Center & the Biota of North America Program



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Alternate common names

Common honey-locust, honey-shucks locust,
honeylocust, honey locust

Uses

Honey-locust is widely planted as a hardy and fast-growing ornamental. It is often used in extreme urban stress areas such as parking lot islands and sidewalk tree squares and has been planted for erosion control, for windbreaks and shelterbelts, and as a vegetation pioneer for rehabilitation of strip-mine spoil banks. Because of the small leaflets and open crown, the trees cast a light shade that permits shade-tolerant turfgrass and partial-shade perennials

to grow underneath. Cultivars have been selected for crown shape and branch angles and leaf color, and most are both thornless and fruitless. Over-use of honey-locust in cities has led to recommendations that its use be discouraged until adequate biodiversity is restored.

Honey-locust wood is dense, hard, coarse-grained, strong, stiff, shock-resistant, takes a high polish, and is durable in contact with soil. It has been used locally for pallets, crates, general construction, furniture, interior finish, turnery, firewood, railroad ties, and posts (fence posts may sprout to form living fences), but it is too scarce to be of economic importance. The wood also was formerly valued for bows.

The geographic range of honey-locust probably was extended by Indians who dried the legumes, ground the dried pulp, and used it as a sweetener and thickener, although the pulp also is reported to be irritating to the throat and somewhat toxic. Fermenting the pulp can make a potable or energy alcohol. Native Americans sometimes ate cooked seeds, they have also been roasted and used as a coffee substitute.

Honey-locust pods are eaten by cattle, goats, deer, opossum, squirrel, rabbits, quail, crows, and starling. White-tailed deer and rabbits eat the soft bark of young trees in winter, and livestock and deer eat young vegetative growth. Honey-locust is planted around wildlife plots and into pastures and hayfields to provide high-protein mast. Cattle do not digest the seeds, but sheep do.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Pea Family (Fabaceae). Native trees growing to 20 meters tall, with an open crown, armed with thick-branched thorns to 20 cm long on the main trunk and lower branches. Bark blackish to grayish-brown, with smooth, elongate, plate-like patches separated by furrows. Leaves are deciduous, alternate, pinnately or bipinnately compound, 10-20 cm long, often with 3-6 pairs of side branches; leaflets paired, oblong, 1-3 cm long, shiny and dark

green above, turning a showy yellow in the fall, typically dropping early. Flowers are greenish-yellow, fragrant, small and numerous in hanging clusters 5-13 cm long, mostly either staminate (male) or pistillate (female), these usually borne on separate trees, but some perfect flowers (male plus female) on each tree (the species polygamo-dioecious). Fruits are flattened and strap-like pods 15-40 cm long and 2.5-3.5 cm wide, dark brown at maturity, pendulous and usually twisted or spiraled, with a sticky, sweet, and flavorful pulp separating the seeds; seeds beanlike, about 1 cm long. The common name "honey" is in reference to the sweet pulp of the fruits.

Variation within the species: Gleditsia triacanthos var. *inermis* (L.) Schneid. ("inermis" means unarmed) is occasionally found wild, apparently more as a populational variant than what is generally given formal taxonomic status as a variety. Such trees have provided stock for selection of some the thornless horticultural forms, but most of the latter are actually derived from buds or stem cuttings taken from the upper, thornless portions of physiologically mature trees thorny in the lower portions. Scions taken from this area generally remain thornless. Breeders also can control the sex of scions by selecting unisexual budwood for cuttings. Certain branches bear only one type of flower, and trees from cuttings of those branches will bear only that type.

Southern races of the species produce fruit more nutritious for stock feeding than northern races.

Natural hybridization between honey-locust and water-locust (*Gleditsia aquatica*) produces *Gleditsia X texana* Sarg., the Texas honey-locust.

Distribution

Honey-locust is essentially Midwestern in distribution, from the west slope of Appalachians to the eastern edge of Great Plains -- scattered in the east-central US from central Pennsylvania westward to southeastern South Dakota, south to central and southeastern Texas, east to southern Alabama, then northeasterly through Alabama to western Maryland. Outlying populations occur in northwestern Florida, west Texas, and west central Oklahoma. It is naturalized east to the Appalachians from South Carolina north to Pennsylvania, New York, and New England and Nova Scotia; sometimes a weed tree in India, New Zealand, and South Africa. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Establishment

Adaptation: Honey-locust occurs on well-drained sites, upland woodlands and borders, rocky hillsides, old fields, fence rows, river floodplains, hammocks, and rich, moist bottomlands. It is most commonly found on moist, fertile soils near streams and lakes. It is tolerant of flooding and also is drought-resistant and somewhat tolerant of salinity. On bottomlands, it is a pioneer tree. On limestone uplands, it is an invader of rocky glades and abandoned farm fields and pastures. It is generally found below 760 meters, but up to 1500 meters in a few places. Flowering: May-June; fruiting: September-October, sometimes remaining on the tree through February.

General: Seed production begins on honey-locust trees at about 10 years and continues until about age 100, with optimum production at about 25-75 years of age. Some seed usually is produced every year but large crops usually occur every other year. The seeds are viable for long periods because of a thick, impermeable seed coat. Under natural conditions, individual seeds become permeable at different periods following maturation so that germination is spread over several years. The seeds are dispersed by birds and mammals, including cattle, which eat the fruits, and buffalo may have been historically important dispersal agents of the seeds. Germinability apparently is enhanced by passage through the digestive tract of animals. Honey-locust also reproduces from stump and root sprouts.

Honey-locust is generally shade-intolerant and reproduction is primarily in open areas, gaps, and at the edges of woods. The ability of honey-locust to invade prairie and rangeland is thought to be related to its tolerance of xeric conditions. Growth is rapid and trees live to a maximum of about 125 years.

Management

The only serious disease of honey-locust is a canker, which is occasionally fatal, but trees in landscape plantings may be damaged by a number of pests and pathogens. Damage to young honey-locust also may be caused by rabbits gnawing the bark and by browsing of livestock and deer.

Honey-locust is easily injured by fire because of its thin bark, but it sprouts after top-kill by fire. It appears to be excluded from prairies by frequent fire. Infrequent fires may create openings for reproduction in bottomland forests. Honey-locust is not a nitrogen fixer.

Cultivars, Improved and Selected Materials (and area of origin)

Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture." These plant materials are readily available from commercial sources.

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