

Fragrant Sumac



Fragrant Sumac (*Rhus aromatica*)

General Description

Spreading shrub with branches turning up at the tip. Tends to form a dense mass of stems and leaves. Good for bank stabilization. Fragrant aromatic leaves, particularly when crushed. Yellow catkin-like flowers.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Yellow, pubescent, covered by leaf scar.

Bud Size - Small.

Leaf Type and Shape - Trifoliate.

Leaf Margins - Acute to acuminate, crenate-serrate.

Leaf Surface - Hairy, pubescent.

Leaf Length - 1½ to 3 inches; leaflets 1 to 2 inches.

Leaf Width - 1½ to 3 inches; leaflets 1/2 to 1 inch.

Leaf Color - Soft green as leaflets unfold, then turning semi-glossy, deep green in summer, and yellow to red in autumn.

Flowers and Fruits

Flower Type - Polygamous or dioecious, male buds are 1 inch catkins, female are short panicles at the ends of branches.

Flower Color - Yellowish.

Fruit Type - Hairy-clustered drupes, 1/4 inch in diameter, females only.

Fruit Color - Red.

Form

Growth Habit - Ascending, branchlets pubescent, rounded mounds.

Texture - Medium, summer; medium, winter.

Crown Height - 3 to 9 feet.

Crown Width - 6 to 10 feet.

Bark Color - Gray-brown, aromatically fragrant when bruised, leaf scars circular, distinctly raised.

Root System - Fibrous, spreading.

Environmental Requirements

Soils

Soil Texture - Adapted to a variety of soils.

Soil pH - 5.0 to 7.5. Prefers acidic soils.

Windbreak Suitability Group - 1, 1K, 3, 4, 4C, 5, 6D, 6G.

Cold Hardiness

USDA Zone 4.

Water

Moderately drought tolerant.

Light

Full sun, to partial (1/2 to 3/4) shade.

Uses

Conservation/Windbreaks

Small to medium shrub for farmstead windbreaks and riparian plantings.

Wildlife

Excellent escape and nesting ground cover.

Agroforestry Products

Wood - Bark used in tanning leather and basket making.

Medicinal - Used in treating diabetes, kidney and bladder discharge, and as a diuretic and mouthwash.

Urban/Recreational

Massing, naturalizing. Fast cover for bank stabilization.

Cultivated Varieties

Green Globe Sumac (*Rhus aromatica* 'Green Globe') - Rounded, 5 to 5½ feet tall.

Gro-low Sumac (*R. aromatica* 'Gro-low') - 2 to 3½ foot ground cover, much lower growing.

Related Species

Skunkbush or Lemonade Sumac (*Rhus trilobata*)

Pest

No major pest problems.

FRAGRANT SUMAC

Rhus aromatica Ait. var.
aromatica

Plant Symbol = RHARA2

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



Oklahoma Biological Survey

Alternate common names

Aromatic sumac, lemon sumac, polecat bush

Uses

Wildlife: The fruit is an important winter food for birds, including turkey, ruffed grouse, robins, and flickers, and for various small mammals (e.g., raccoon, opossum, chipmunk). The foliage is relatively unpalatable to most species of wildlife and domestic livestock. Thickets of fragrant sumac provide cover for many species of birds and small mammals.

Conservation: Fragrant sumac is not widely used for landscape plantings, probably because of its relatively small size, but it is used as a ground cover, especially on banks. The plants are hardy and can grow in sun or partial shade. The main ornamental feature is the orange to red fall foliage color. Several cultivars have been selected – mostly for variation in growth form. Fragrant sumac also has been used for rehabilitating disturbed sites such as banks, cuts, and fills.

Ethnobotanic: American Indians made a tart drink (“Indian lemonade”) from the ripe fruits of fragrant sumac (larger-fruited *Rhus* species provide a larger quantity of the same substance). The bark of all sumacs has been used as an astringent, and leaves

and bark can be used for tanning leather because of the high tannin content. Various Indian tribes have used fragrant sumac in treatment for various illnesses and health problems. The leaves, mixed with tobacco, were used as a smoking mixture.

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: Sumac family (Anacardiaceae). Straggling to upright native shrubs 0.5-2(-2.5) meters tall (rarely tree-like), forming colonial thickets of up to 10 feet spread, suckering from the roots, the branches slender ascending, puberulent, glabrate, or densely pilose; buds naked, tiny, yellow, hairy, surrounded by a raised, circular leaf scar. Leaves: deciduous, alternate, compound with 3 leaflets, variable in shape, lobing, and margin, the leaflets unstalked, ovate to rhomboid, more or less wedge-shaped at the base, coarsely-toothed, usually shiny-glabrous above, the terminal leaflet 3-6.5 cm long; summer foliage green to glossy blue-green, turning orange to red or purple in the fall. Flowers: yellow, in small, dense inflorescences on short lateral shoots, opening before the leaves, bisexual and unisexual, both types borne on the same plant (the species polygamodioecious); male (staminate) flowers in yellowish catkins, female (pistillate) flowers in bright yellow, short panicles at the ends of branches. Fruits: 5-7 mm in diameter, bright red at maturity and densely hairy, containing a single nutlet 3.8-4.5 mm long, in terminal clusters. The common name “sumac” is from the Middle English for related tree. The leaves are fragrant or at least odorous.

Variation within the species: three varieties are currently recognized, based on differences in geography, leaf shape, and pubescence of stems, leaves, and fruits. Var. *aromatica* occurs over nearly the whole range of the species.

Rhus aromatica var. *arenaria* (Greene) Fern. – restricted to Ohio, Indiana, and Illinois.

Rhus aromatica var. *serotina* (Greene) Rehd. – the western segment, occurring from South Dakota to Texas and eastward to Arkansas, Missouri, Iowa, and Illinois. It apparently intergrades with forms of *Rhus*

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trilobata where their ranges meet in the Great Plains (mainly from Texas to South Dakota).

Distribution: Fragrant sumac is native to most of the US east of the Rocky Mountains, from Ontario and western Quebec, Massachusetts and New Hampshire to Florida and west to the Great Plains in Texas to South Dakota. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Adaptation

Fragrant sumac is common along the forested eastern margins of the Great Plains and in open or otherwise disturbed sites on the margins of the Gulf Coast prairie. It grows at a range of sites including open rocky woodlands, valley bottoms, lower rocky slopes, and roadsides. Flowering: March-May, usually before the leaves expand; fruiting: June-August.

Establishment

Fragrant sumac reproduces from seed or clonally via root suckers. It is a pioneer species, establishing rapidly from seed after heavy disturbance, particularly fire. Browsing by deer may be responsible for rapid early removal of mature fruits; birds are the primary dispersal later. Individual plants may live about 20-30 years; clones can live substantially longer. Fragrant sumac sprouts vigorously after fire and can be propagated from root cuttings.

Seed dormancy results from the presence of a hard, impermeable seed coat. Fire scarifies seeds, promoting germination; various artificial methods of pretreatment have been tested, including sulfuric acid, and hot water soaks, mechanical scarification, and cold treatment. Pretreated sumac seeds generally begin germination within 10-20 days. The resistant seed coats probably allow the seeds to remain viable for several years in the humus layer, as do those in seeds of some other *Rhus* species, allowing re-establishment through seed progeny when conditions are favorable for germination and growth.

Management

Fragrant sumac reportedly sprouts vigorously after fire in the southern Great Plains, and the primary mode of colonization after disturbance is through sprouting from the adventitious-bud root crown.

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

These plant materials are readily available from commercial sources. 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."

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'Konza'

Aromatic Sumac

Rhus aromatica Aiton var. *serotina*
(Greene) Rehder

A Conservation Plant Release by USDA NRCS Manhattan Plant Materials Center, Manhattan, Kansas



Figure 1. Leaves and fruit cluster of aromatic sumac in the summer around mid July. Photo courtesy of Google images.

'Konza' aromatic sumac (*Rhus aromatic* var. *serotina*) (Greene (Rehd.) is a cultivar released in 1980 in cooperation with the Kansas and Nebraska Agricultural Experiment Stations.

Description

Konza aromatic sumac is a deciduous, native, perennial shrub which grows to a height of 10 feet. The plant is usually wider than it is tall, but growth form will vary depending on the soils and site location of the planting. The leaves of Konza are compound, consisting of three leaflets, and are attached to the plants stem in an alternate fashion. The trifoliate leaves are 1 to 3 inches long, petiolate, with pubescence below. Leaves are fragrant or at least odorous. It has orange to red fall foliage color. This shrub occurs singly or in dense thickets that may be connected by rhizomes. Root systems are deep and extensively branched. Stems are numerous, spreading and highly branched, and brown and pubescent when young, but develop a gray bloom with age. Plants of aromatic sumac are functionally dioecious, having male and female flowers on different plants. However, there are some plants that have some perfect flowers on an otherwise staminate (male) or pistillate (female) plant. Flowers are yellow in small dense inflorescences on short lateral shoots, staminate flowers in yellowish catkins, pistillate flowers in bright yellow, short panicles at the branch ends. Fruits are orange red, sticky, berry-like drupe containing a single bony seed.

Source

The original germplasm for the release Konza was collected in 1958 on a limestone break south of Manhattan, K.S. Initial evaluation at Manhattan consisted of 20 accessions representing native collections from Wyoming, Nebraska, Missouri, Kansas and Oklahoma. The Konza germplasm exhibited the least amount of leaf rust and insect damage to the foliage. The germplasm was tested as PMK-32 and compared to commercial sources in 64 field plantings made in Nebraska, 24 in Kansas and 5 in Oklahoma in the 1970's. Konza proved superior in growth, establishment and form to the other materials tested.

Conservation Uses

The fruit is an important winter food for birds, including turkeys, ruffed grouse, robins and flickers, and for various small mammals. It is useful for windbreaks, cover on areas subject to critical erosion, screening unsightly areas and noise abatement. Although not selected for landscape use, Konza does have potential for use in highway rest areas, recreation areas, and for trapping blowing snow. Because it is a native species it requires little maintenance and will tolerate some drought when fully established.

Area of Adaptation and Use

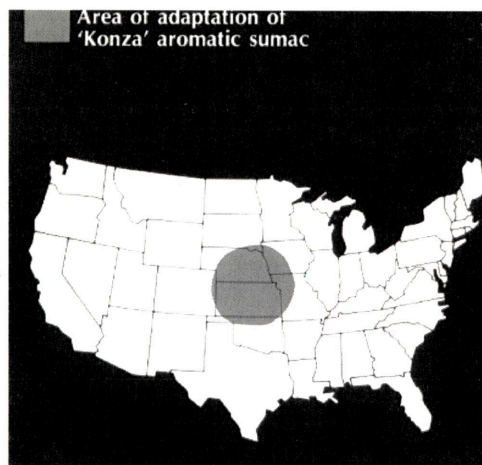


Figure 2. Area of adaptation of 'Konza' aromatic sumac.

Establishment and Management for Conservation Plantings

Seed should be planted at a ½ inch depth in a dry, coarse textured soil. Seeding rates of 2 to 4 pounds per acre are recommended depending on row spacing. It may be broadcast on rough surfaces or in pits. If drilled the seed

should be planted with other slow growing shrub species. The seedlings grow moderately well, but young plants are not highly competitive with fast growing herbaceous species. In the bare root nursery trade seed should be planted at ½ inch depth with 25 viable seed units per linear foot of row. Beds should be mulched to prevent excessive drying. Plants may be lifted as 1-0 or 2-0 stock, depending on growth rate. Field transplanted seedlings should be 8 to 12 inches tall. Once they are established seedlings are hardy and resilient.

Ecological Considerations

Konza can produce large thickets in grazed areas due to its vegetative reproduction. It is relatively unpalatable to livestock and wildlife due to the high tannin content of its leaves and stems. The plants are hardy and can grow in full sun or partial shade. This species is susceptible to vascular wilt caused by *Fusarium oxysporum*. A sumac feeding psyllid (*Calophya trioziomiwa*) has been collected on fragrant sumac in many locations.

Seed and Plant Production

Fruits can be harvested in late summer or early fall. Fruit of *Rhus aromatica* is synchronous and does not support a typical staggered fruit ripening pattern. Fruits are collected by hand or by flailing the branches after leaf drop in the fall. Harvested fruits are macerated and flushed with water to remove the pulp, skin and debris from the lot. The remaining materials, including the seeds, are dried and fanned to remove loose debris. There are approximately 20,000 cleaned seed per pound. The recommended standards for purchasing seeds are 40 percent germination and 95 percent purity. Cleaned seed can remain viable in a dry, cool storage unit for up to five years. Seed germination is inhibited by a hard impervious seed coat and embryo dormancy. Both forms of dormancy vary widely among seed lots. Seed coat permeability may be increased by a 20 minute to 2 hour concentrated sulfuric acid scarification process. A cool, wet stratification period of 30 to 120 days is required to release embryo dormancy. Embryo dormancy can also be broken in fragrant sumac by a gibberellic acid (GA3) treatment at 500 to 1000 parts per million (ppm) concentrations.

Availability

For conservation use: Konza aromatic sumac seedlings are available from conservation nurseries.

For seed or plant increase: The Manhattan PMC maintains breeder and foundation seed stocks. There is no Registered Class of seed for Konza.

For more information, contact:
Manhattan Plant Materials Center
3800 South 20th Street
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Release Brochure for Konza Aromatic Sumac (*Rhus aromatica*). USDA-Natural Resources Conservation Service, Manhattan PMC, Manhattan, Kansas 66502. Published: [February 2012]

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