

Koelreuteria elegans: Flamegold¹

Edward F. Gilman and Dennis G. Watson²

Introduction

A yellow carpet of fallen petals, delicate leaflets which cast a mosaic of welcoming shade year round, and large clusters of persistent rose-colored, papery capsules all help to make flamegold a very popular landscape tree. This broad-spreading, evergreen tree reaches a height of 35 to 45 feet and eventually takes on a flat-topped, somewhat irregular silhouette. It is often used as a patio, shade, street, or specimen tree. The small, fragrant, yellow flowers appear in very showy, dense, terminal panicles in early summer, and are followed in late summer or fall by large clusters of the two-inch-long “Chinese lanterns”. These papery husks are held above the evergreen foliage and retain their pink color after drying and are very popular for use in everlasting flower arrangements. The bark is smooth and light brown when young, becoming ridged and furrowed as the tree matures. It is easily distinguished from *Koelreuteria paniculata* since *Koelreuteria elegans* has twice compound leaves, whereas *Koelreuteria paniculata* has single pinnate compound leaves; different from *Koelreuteria bipinnata* only in the fact that *Koelreuteria elegans* is evergreen.

General Information

Scientific name: *Koelreuteria elegans*

Pronunciation: kole-roo-TEER-ee-uh ELL-eh-ganz

Common name(s): Flamegold

Family: *Sapindaceae*

USDA hardiness zones: 9B through 11 (Fig. 2)

Origin: not native to North America

Invasive potential: According to the UF/IFAS Assessment of the Status of Non-Native Plants in Florida’s Natural Areas (Fox *et al.* 2005), *Koelreuteria elegans* (flamegold) may be used with caution in the central and southern zones of Florida, but should be managed to prevent its escape (counties are listed by zone at: <http://plants.ifas.ufl.edu/assessment>); and is not considered a problem species and may be used in north Florida.

Uses: parking lot island < 100 sq ft; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; reclamation; urban tolerant; shade; specimen; street without sidewalk; tree lawn > 6 ft wide; tree lawn 4-6 feet wide; highway median

Availability: not native to North America



Figure 1. Middle-aged *Koelreuteria elegans*: Flamegold
Credits: Ed Gilman, UF/IFAS

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2. Edward F. Gilman, professor, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Agricultural Engineering Department, UF/IFAS Extension, Gainesville, FL 32611.

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Figure 2. Range

Description

Height: 25 to 50 feet

Spread: 35 to 50 feet

Crown uniformity: irregular

Crown shape: round

Crown density: open

Growth rate: fast

Texture: coarse

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: bipinnately compound

Leaf margin: incised, serrate

Leaf shape: ovate, oblong

Leaf venation: pinnate

Leaf type and persistence: deciduous

Leaf blade length: 2 to 4 inches

Leaf color: green

Fall color: yellow

Fall characteristic: not showy



Figure 3. Foliage

Flower

Flower color: yellow

Flower characteristics: very showy

Fruit

Fruit shape: oval, elongated

Fruit length: 1 to 3 inches

Fruit covering: dry or hard

Fruit color: pink

Fruit characteristics: does not attract wildlife; showy; fruit/leaves not a litter problem

Trunk and Branches

Trunk/bark/branches: branches droop; not showy; typically one trunk; thorns

Pruning requirement: needed for strong structure

Breakage: susceptible to breakage

Current year twig color: brown

Current year twig thickness: very thick

Wood specific gravity: unknown

Culture

Light requirement: full sun

Soil tolerances: clay; sand; loam; alkaline; acidic; extended flooding; well-drained

Drought tolerance: high

Aerosol salt tolerance: moderate

Other

Roots: not a problem

Winter interest: yes

Outstanding tree: no

Ozone sensitivity: unknown

Verticillium wilt susceptibility: susceptible

Pest resistance: resistant to pests/diseases

Use and Management

Trees need to be trained when young to develop a strong branch structure. Spacing main branches apart along a central trunk is crucial to developing a durable tree. As soon as you see them, remove any double or multiple trunks which develop, especially if they have embedded or pinched bark in the branch crotch. Be sure to locate the first major branch high enough off the ground so that drooping leaves and branchlets will not get in the way of traffic below. Train major branches so they grow up and out, spreading from the trunk to create the clearance needed for street tree or parking lot planting.

The wood is fairly weak and branches can break in strong wind storms, but the tree definitely has a place in many landscapes. Planted in a full sun location, flamegold makes a moderately dense shade tree, but there is considerable variation among individuals of the species. Properly pruned

and trained trees can be planted as street or parking lot trees, but do not commit large areas to this tree due to the possibility of them breaking up as they reach about 30 years old. They will be the source of many compliments when they are in flower and fruit. Dead wood periodically forms and must be removed to maintain a neat appearance.

Flamegold is a tough tree which should be grown in full sun on any well-drained soil, in sand or heavy clay, and should receive moderate watering. The tree becomes leggy and thin in partial shade. When well-established, Chinese flamegold tree will tolerate air pollution, heat, and drought. Tolerant of alkaline soil pH, it does well in many parts of the Deep South where soils are often calcareous.

Propagation is by seed, which will germinate within six to eight days.

Pests and Diseases

Scale, mushroom root rot on wet soil or on old trees. A canker causes dead and sunken areas on the bark. Coral pink fruiting bodies develop on the diseased bark. Prune out infected branches and fertilize to maintain tree health.

Verticillium wilt attacks *Koelreuteria*. The disease causes wilting and death of leaves on infected branches. Eventually the entire tree may be killed. Fertilize to stimulate growth. There are no chemical controls.