



Malus x 'Red Jewel' 'Red Jewel' Crabapple¹

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INTRODUCTION

'Red Jewel' Crabapple is grown for its splendid white flowers and attractive, brilliantly-colored red fruit (Fig. 1). The tree grows to only 15 feet tall with an irregular, oval crown form making this cultivar well suited as an ornamental or small street tree. Since the tree branches low to the ground, lower branches need to be removed as the tree grows larger to allow for pedestrian and vehicular clearance along a street or walkway. As with many of the Crabapples, specify tree form plants if using it as a street tree.

GENERAL INFORMATION

Scientific name: *Malus x* 'Red Jewel'

Pronunciation: MAY-lus

Common name(s): 'Red Jewel' Crabapple

Family: *Rosaceae*

USDA hardiness zones: 4 through 8A (Fig. 2)

Origin: not native to North America

Uses: Bonsai; espalier; large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); medium-sized parking lot islands (100-200 square feet in size); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; small parking lot islands (< 100 square feet in size); narrow tree lawns (3-4 feet wide); specimen; sidewalk cutout (tree pit); residential street tree; tree has been successfully grown in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common

Availability: generally available in many areas within its hardiness range

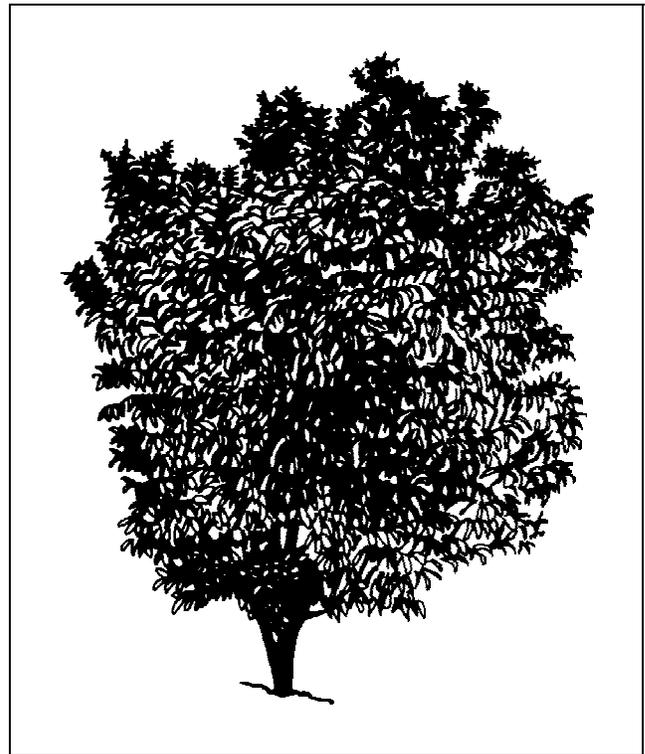


Figure 1. Middle-aged 'Red Jewel' Crabapple.

DESCRIPTION

Height: 12 to 15 feet

Spread: 10 to 15 feet

Crown uniformity: irregular outline or silhouette

Crown shape: oval; vase shape

Crown density: moderate

Growth rate: slow

Texture: medium

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Figure 2. Shaded area represents potential planting range.

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: simple

Leaf margin: crenate; serrate; serrulate

Leaf shape: elliptic (oval)

Leaf venation: banchidodrome; pinnate

Leaf type and persistence: deciduous

Leaf blade length: 2 to 4 inches; less than 2 inches

Leaf color: green

Fall color: yellow

Fall characteristic: not showy

Flower

Flower color: white

Flower characteristics: spring flowering; very showy

Fruit

Fruit shape: round

Fruit length: < .5 inch

Fruit covering: fleshy

Fruit color: red

Fruit characteristics: does not attract wildlife; no significant litter problem; persistent on the tree; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; routinely grown with, or trainable to be grown with, multiple trunks; not particularly showy; tree wants to grow with several trunks but can be trained to grow with a single trunk; no thorns

Pruning requirement: needs little pruning to develop a strong structure

Breakage: resistant

Current year twig color: brown; reddish

Current year twig thickness: medium; thin

Culture

Light requirement: tree grows in full sun

Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained

Drought tolerance: moderate

Aerosol salt tolerance: low

Soil salt tolerance: moderate

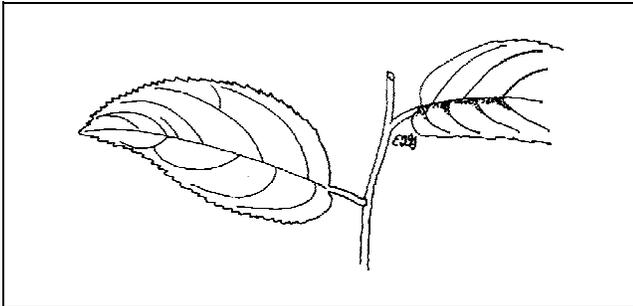


Figure 3. Foliage of 'Red Jewel' Crabapple.

Other

Roots: surface roots are usually not a problem

Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers

Outstanding tree: not particularly outstanding

Invasive potential: little, if any, potential at this time

Verticillium wilt susceptibility: not known to be susceptible

Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

Plants are used for specimens, patios, and along streets to create a warm glow of color each spring. They are attractive during the summer, bearing glossy green foliage. Popular around overhead powerlines due to their small stature, a row of Crabapples along each side of the street or median strip can "make" a neighborhood. Select plants which have been grafted onto EMLA 106 or 111 rootstock to reduce root suckering.

Crabapple is well-adapted to compacted urban soil, tolerates drought and poor drainage well and is somewhat tolerant of salt-spray. Well adapted to all areas within its hardiness zone range, including Texas and Oklahoma. A very adaptable tree. Do not overfertilize since this could increase the incidence of disease. 'Red Jewel' is resistant to disease, but slightly susceptible to powdery mildew. Crabapples are best grown in a sunny location with good air circulation and have no particular soil preferences, except soil should be well drained. Root-pruned trees transplant most easily.

According to the Ornamental Crabapple Society, Crabapples adapted for street tree and urban use include 'Adams', 'Bob White', 'David', 'Donald Wyman', 'Profusion', 'Red Splendor' and *Malus floribunda*. Be sure to specify tree form plants for

street tree use since branching may be too low on trees grown for specimen use. Crabapples grow well in the Texas panhandle but are not extremely drought tolerant and are not well suited for high pH soil.

Contact the Ornamental Crabapple Society, Morton Arboretum, Lisle, Illinois 60532 for more information on Crabapples.

White flowered cultivars include: 'Baccata Columnaris' - narrow crown, white flowers, red or yellow fruit; 'Baccata Gracilis' - slow-growing, shrub-like, white flowers, fruit small and dark red, annual bearer; 'Baccata Jackii' - upright form, white flowers, bright red fruit, annual bearer, also good to excellent disease resistance; 'Callaway' - pink buds, white flowers, red fruit; 'David' - pink buds open to white flowers, scarlet fruit, good to excellent disease resistance; 'Dolgo' - pink buds, white flowers, large red fruits; 'Donald Wyman' - disease-resistant but susceptible to fire blight, glossy red showy fruit; 'Ellwangeriana' red fruit, disease-resistant; 'Floribunda' - pink to red bud opens to single white flower, yellow or red fruit commonly available; 'Gloriosa' - pink bud opens to white flower, red, large fruit; 'Golden Hornet' - upright arching habit, white flower, yellow fruit; 'Gorgeous' - pink bud opens to large, white flower, red to orange fruit; 'Harvest Gold' - white flowers followed by yellow fruits; 'Hupehensis' - Tea Crabapple - pink buds open to white flowers, greenish fruit; 'Katherine' - double flowers opening pink, fading to white, fruit yellow and red; 'Mary Potter' - pink buds open to single white flowers, red and fairly large fruit, susceptible to scab and powdery mildew; 'Red Jade' - weeping habit, white flowers, red fruit persisting after leaves drop; 'Sargenti' - dwarf, pink bud opens to white flowers, small dark red fruit; 'Snowdrift' - white flowers, orange red fruit; 'Tanner' - white flowers, red fruits, susceptible to diseases; 'Tschonoski' - white flowers, vigorous growth, good bronze red fall color, fruit brownish; 'White Angel' - white flowers, glossy red fruit persisting into winter; 'White Candle' - pink buds open to white flowers, red fruit, upright growth habit; 'Zumi Calocarpa' - white flowers, bright red persistent fruit.

One of the best Crabapples for the south is *Malus* x Callaway.

Disease-resistant cultivars include: 'David', 'Dolga', 'Donald Wyman', 'Ellwangeriana', 'Inglis', 'Jackii', 'Jewelberry', 'Margaret', 'Mary Potter', 'Mount Arbor Special', 'Prairifire', 'Professor Sprenger', 'Tomiko'.

Pests

Aphids infest branch tips and suck plant juices, and are quite common. They can deform newly emerging foliage and secrete honey dew creating a sticky mess beneath the tree, but will not kill the tree.

Fall webworm makes nests on the branches and feeds on foliage inside the nest. Small nests can be pruned out or sprayed with *Bacillus thuringiensis*. Controlling severe infestations may require other chemicals.

Scales of various types are controlled with horticultural oil.

Borers can be a problem on stressed trees.

Mites are too small to see easily so they can cause much foliage discoloration before being detected. Mites can be controlled to a degree with horticultural oil, but other chemicals are often required by the time mites are detected. The mite infestation can also be severe by the time foliage chlorosis or bronzing is evident.

Eastern tent caterpillar builds tents or nests in trees in early summer or late spring. Feeding occurs on foliage outside the nest. Defoliation can be extensive if infestation is severe, and repeated defoliations for several years can weaken trees. Small nests can be removed by pruning them from the tree. Spray with *Bacillus thuringiensis* or other approved chemical. Do not burn nests while they are still in the tree.

Diseases

'Red Jewel' is fairly resistant to disease but is slightly susceptible to powdery mildew.

Scab infection takes place early in the season and dark olive green spots appear on the leaves. In late summer the infected leaves fall off when they turn yellow with black spots. Infected fruits have black, slightly raised spots. Use resistant varieties to help avoid this severe problem.

Fire blight susceptible trees have blighted branch tips, particularly when the tree is growing rapidly. Leaves on infected branch tips turn brown or black, droop, and hang on the branches. The leaves look scorched as by a fire. The trunk and main branches become infected when the bacteria are washed down

the branches. Cankers form and are separated from adjacent healthy bark by a crack. The infected bark may be shredded. Use resistant cultivars when available since severe infections on susceptible trees can kill the tree.

Powdery mildew coats leaves with white fungal growth resembling powder.

Cedar apple rust causes brown to rusty-orange spots on the leaves. Badly spotted leaves fall prematurely, and defoliation can be heavy. Redcedars (*Juniperus virginiana*) are the alternate host.

Crabapples are subject to several canker diseases. Prune out infected branches, avoid unnecessary wounding, and keep trees healthy.