

# Home Garden Plums

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Plums belong to the *Prunus* genus and consists of many species of different origins and diverse fruit types. Most commercially grown varieties are derived from either Japanese or Asian plums (*P. salicina* and its interspecific hybrids) or European plums (*P. domestica*). Japanese plums are primarily for fresh consumption, while European plums are for both processing and fresh consumption. The products obtained from processing plums include prunes (dried fruit, the predominant product), canned fruit, jam, jelly, juice, and beverages.

One of the main factors of determining adaption to a location of fruit trees is the chill hours. Different fruit trees and varieties have different chill hour requirements that have to be satisfied to enable normal plant growth and fruiting. A chill hour is the amount of time that the temperature is between 32 °F and 45 °F. You can find this information using the [Georgia Weather System](#). Within this system, click on the location that is closest to you and look for the link to the chill hours calculator. To calculate the chill hours, choose dates from October 1 to February 15. You will then be able to see the historical chill hours within your area, which can be used as thresholds to select the best varieties suited for your location.

In the U.S., California is the dominant producer of European and Japanese plum types. Many other states, including Georgia, are small producers of plums, primarily Japanese plums. To come out of dormancy and bloom efficiently, European plums require about 700–1,100 chilling hours and Japanese plums require about 500–900 chilling hours. In this context, European plums are better adapted to cooler regions than Japanese plums. For more information about plum planting and culture, see University of Georgia Cooperative Extension Circular 1063, [Home Garden Peaches](#), as the procedures used for the site selection, soil preparation, and culture management of plums are quite similar to peach.



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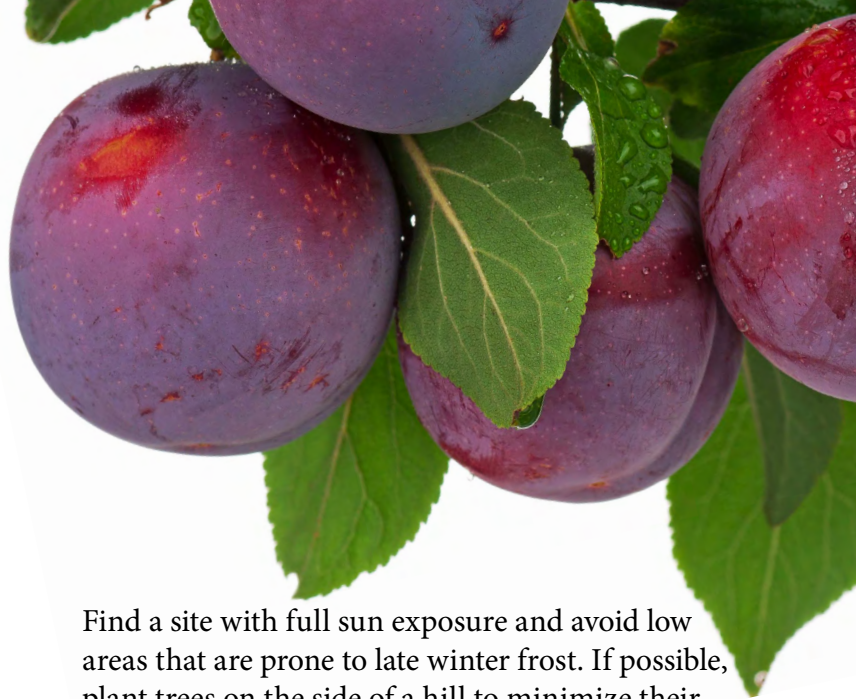
## Varieties

Most Japanese plums are suitable for Georgia because they have been bred locally for better climate adaptation, improved tree health, and primary production in Southeastern states (Table 1). The choice of varieties for Georgia gardens depends on several factors. Most plum varieties are self-incompatible (the flowers cannot receive pollen on its own to produce fruit) and require appropriate pollinators for reliable cropping. Similarly, fruit set of self-fertile (the flowers can receive pollen on its own to produce fruit) varieties usually improves with the use of pollinators. For this reason, it is highly recommended to plant multiple varieties in a single location to ensure proper pollination.

High disease pressure and short tree longevity are always a concern under the hot, humid conditions of the Southeast. If few or no sprays will be used in the home orchard, select varieties with high health and quality ratings for best results. Fruit characteristics should match the intended final use. Taste may be the most desirable quality for homegrown plums, while size and firmness would be important for roadside sales. For example, the “green plum” varieties (as described in the table below) are not desirable for fresh consumption.

## Planting

As previously mentioned, growers should choose to plant more than one variety of plums to ensure proper cross pollination and improve fruit set. Even if the variety you have chosen is self-pollinating, planting another variety close by will improve fruit set and overall yield.



Find a site with full sun exposure and avoid low areas that are prone to late winter frost. If possible, plant trees on the side of a hill to minimize their exposure to wind and cold injury. In the fall prior to planting, a good practice is to determine the soil pH and fertility. Soil test kits can be obtained from your local UGA Extension office, which provides both soil and water testing services. To submit a viable sample, collect the soil from several different locations to a depth of 6 to 8 in. Mix the collected soil samples in a plastic bucket, unless there is a concern of major differences in the soil characteristics across locations. Otherwise, fill the soil test bag with the mixed soil for testing or individual samples per location, and return samples to the Extension office.

Adjusting the soil pH and phosphorus levels is best done prior to planting. The recommended pH for plums is 6.5. The amount of lime (if needed) as well as other nutrient recommendations will be provided in the soil test report. Lime- and phosphorus-based fertilizers can be incorporated into the soil at the planting location based on the soil test result recommendations. It is important to test and amend soil to start your planting site in optimal conditions. Other essential nutrients can be applied after the trees are established.

Plant dormant trees in February or the beginning of March. Dig a hole that is twice as wide but the same depth as the tree container or root ball (if bare root trees are used). Spread the roots in the hole and cover them with soil, firming the soil around the stem. Water thoroughly after planting. Supply plenty of moisture during the summer months and well into the fall, since fall in Georgia is prone to periods of episodic drought.

Table 1. Japanese plum varieties available for Georgia and Southeastern U.S. states.‡

Name	SF	Pollen	Health	Quality	Skin	Flesh	Size	Shape	Firm	Bloom	Ripe	Breeder	Source	Year	Comments
'Methley'	Yes	+++	Fair	Good	Red-Purple	Blood	1.4	Round	+	-1	6/3	-	SA	1920	Universal pollener, susceptible to black knot
'Mariposa'	Yes	++	Fair	VG	Bronze	Blood Red	1.9	Round-Oblate	+++	-5	7/2	JBT	CA	1935	California cultivar survives in Coastal Plain only
'AU Amber'	Yes	+++	Good	VG	Red-Purple	Amber	1.5	Round	++	4	5/28	JDN	AU	1988	Excellent flavor for season, light crops
'Crimson'	No	++	Fair	Good	Bright Red	Red	1.6	Round	+++	1	7/6	JDN	AU	1973	Small
'Purple'	No	++	Poor	Good	Purple	Yellow	1.7	Round	+++	3	7/13	JDN	AU	1973	Very susceptible to leaf scald, upper north Georgia only
'Homeside'	No	++	Poor	Good	Light Red	Amber	2.2	Round-Ovate	++	0	6/18	JDN	AU	1975	Very large, 'Ozark Premier' type, sizes before colors
'AU Producer'	No	++	Fair	Good	Dark Red	Red	1.7	Round	++++	2	6/20	JDN	AU	1977	Very productive, must be thinned to size
'AU Roadside'	No	++	VG	VG	Dark Red	Red	1.9	Round-Ovate	+++	-2	6/19	JDN	AU	1983	Soft, replaces 'Ozark Premier' for home/local use
'AU Rosa'	No	+++	VG	Good	Red	Light yellow	2	Round	+++	0	6/22	JDN	AU	1988	Attractive fruit, weak tree in Georgia
'AU Rubrum'	No	++	Good	Good	Dark Red	Red	1.9	Round	+++	-1	6/15	JDN	AU	1988	Similar to 'Morris'
'Ozark Premier'	No	++	Poor	Good	Dark Red	Yellow	2.1	Round-Oblate	+++	1	6/25	PHS	MAES	1946	Standard variety, local sales only
'Wade'	No	++	Poor	Good	Deep Red	Yellow-Red	1.7	Round-Oblate	++	1	6/7	MBH	CU	1974	Small fruit, local sales mainly
'Morris'	No	++	Poor	Good	Dark Red	Red	1.8	Round-Ovate	++++	-1	6/16	HHB	TAMU	1974	Attractive fruit, reliable commercially

Name	SF	Pollen	Health	Quality	Skin	Flesh	Size	Shape	Firm	Bloom	Ripe	Breeder	Source	Year	Comments
'Explorer'	No	++	Good	VG	Purple	Amber	2	Round-Oblate	++++	1	7/3	JMT	USDA	1980	May have cold-tender buds, poor crops
'Byrongold'	No	+++	Good	Good	Yellow	Yellow	2	Round	+++	-3	6/30	JMT	USDA	1985	Allow to color well for best flavor
'Rubysweet'	No	+++	VG	VG	Red-Bronze	Blood Red	1.9	Round-Oblate	++++	-2	6/15	WRO	USDA	1989	Tastes good, productive
'Black Ruby'	No	++	Good	Good	Black	Yellow	2.1	Round	++++	0	6/22	WRO	USDA	1994	Slightly sour skin, upright tree
'Ruby Queen'	No	++	Good	VG	Dark Red	Red	2	Round	++++	0	7/20	WRO	USDA	2004	Avoid overcropping young tree, excellent flavor
'Spring Satin'	No	++	Good	Good	Red-Black	Yellow-Red	1.9	Round	++++	0	6/2	WRO	USDA	2000	Plum-apricot hybrid, light fuzz, upright tree, tart until soft
'Shirley'	No	+++	Fair	Good	Dark Red	Yellow	1.8	Ovate-nose	++	2	6/6	-	-	-	Large but poor shape, "nose" softens fast
'Six Weeks'	No	++	Fair	Poor	Red	Yellow-Red	1.5	Round-Ovate	+	-1	5/25	JSK	TX	1901	"Green plum," weak branches
'Bruce'	No	+	Fair	Poor	Orange-Red	Yellow-Red	1.7	Round-Ovate	+	-3	5/31	HHB	TAMU	1976	"Green plum," reliable cropper
'Robusto'	No	+	VG	fair	Bright Red	Red	1.6	Round	++	-1	6/5	JMT	USDA	1982	"Green plum," vigorous, productive
'Segundo'	No	+	VG	fair	Yellow-Red	Yellow-Red	1.9	Round	++	-3	6/11	JMT	USDA	1985	"Green plum," like Robusto

‡ This table is updated from an early summary (Okie *et al.*, 2009).

**Pollen shed** and **firmness** from poor (+) to much (++++).

**Time of bloom** in days is relative to the bloom date of Santa Rosa, which averages March 11 at Byron, Georgia.

**Ripeness** refers to the average peak time in Byron, Georgia.

**Tree health** roughly reflects susceptibility to bacterial canker and spot, leaf scald, and short life.

**SF**=self-fertile; **VG**=very good; **SA**=South Africa; **TX**=Texas; **CA**=California; **GA**=Georgia; **JBT**=J.B. Thompson; **JDN**=J.D. Norton; **PHS**=P.H. Shephard; **MBH**=M.B. Hughes; **HHB**= H.H. Bowen; **JMT**=J.M. Thompson; **WRO**=W.R. Okie; **JSK**= J.S. Kerr; **AU**=Auburn University; **CU**=Clemson University; **TAMU**=Texas A&M University; **MAES**=Missouri Agricultural Experiment Station; **USDA**=The United States Department of Agriculture, Agriculture Research Service; - Unknown.

## Pruning

Prune plum trees to 18 to 24 in. immediately after planting to force the budbreak of lower buds. Later in the summer, select four shoots that are spaced out in a 360° space, with 25 to 30 degrees of inclination to maintain the fruit weight. Those shoots will become four scaffolds that will make the fruit easy to harvest, and this training system is called an “open vase system.” During the summer of the second year, prune all the branches in the center of the tree and any branches below the four scaffolds. Repeat that the summer of the third year, and maintain the open vase shape from then on to ensure a good crop of fruit in the future. For illustration and more detailed information, refer to UGA Extension Circular 1087, [Home Fruit Orchard Pruning Techniques](#).

## Fertilization

Do not fertilize newly planted plum trees immediately after planting, and never add fertilizer to the planting hole (only lime- and phosphorus-based fertilizers a year prior to planting). In the absence of a soil test, begin fertilizing at the end of March by applying 0.5 lb of 10-10-10 fertilizer per tree, broadcasting evenly around the tree. Be sure to keep fertilizer at least 4 to 5 in. from the tree trunk. In May and July, fertilize the trees with 0.5 lb of calcium nitrate.

In the second year, start fertilization again in March by applying 1 lb of 10-10-10 fertilizer per tree, broadcasting over a 6-in.-diameter circle. In July, broadcast 0.66 lb of calcium nitrate over a 6-in.-diameter circle. If calcium nitrate is not available, use a complete fertilizer with micronutrients included.

For 3-year-old trees and older, continue fertilizing in March and July. Adjust amounts based off of the crop load and desired growth rate.

## Fruit Thinning

Good fruit size can be achieved by fruit thinning, which consists of removing small fruitlets from the tree. A similar technique is used in peaches and other fruit trees. Fruit thinning is normally done between 30 to 45 days after bloom. Desirable size and quality is obtained by leaving fruit every 2 to 4 in.



# Diseases and Insects

Plum trees are susceptible to several diseases, like bacterial canker, plum leaf scorch, bacterial leaf spot, brown rot and rust. Pests like red spider mites, aphids, plum curculio, and Japanese beetle can also be a problem. For recommendations about management and control of diseases and pests, please refer to UGA Extension Special Bulletin 48, the home and garden edition of the [Georgia Pest Management Handbook](#).

## Diseases

**Bacterial leaf spot** – Infected leaves appear to be yellow-reddish, thickened, curly, and they drop prematurely. Defoliation will affect fruit size, fruit cracking, tree vigor and winter cold hardiness. Infected plum fruit will develop indentations and small spots.

**Control:** *The best prevention to bacterial leaf spot is to plant varieties that are resistant to the disease. Copper-based fungicides can be used for control of this pathogen.*



Bacterial spot in peach leaves. Similar symptoms in plum leaves. Photo: U. Mazzucchi, Università di Bologna, Bugwood.org

**Brown rot, or *Monilinia fructicola*** – In the spring infected flowers appear wilted and discolored, commonly referred to as “blossom blight.” Infected areas in fruit become sunken and water-soaked. Fungal spores are often present. If not treated, the whole tree wilts, loses vigor, and eventually dies.

**Control:** *Remove infected fruit or limbs and provide proper drainage. In Georgia, it is very difficult to control brown rot without fungicides. Apply approved fungicides.*



Brown rot in plum. Photo: University of New South Wales, University of New South Wales, Bugwood.org

**Bacterial canker** – Bacterial canker is a very invasive disease and can kill a tree if left untreated. The first sign of a problem occurs when orange-reddish gum starts oozing from the infected area in April or May.

**Control:** *Remove infected limbs and scaffolds. Never leave pruned wood under the trees. Plant resistant varieties, and keep in mind that California varieties are known to be highly susceptible.*



Bacterial canker in plum. Photo: U. Mazzucchi, Università di Bologna, Bugwood.org

**Rust** – Yellow and brown lesions appear on the lower and upper sides of the leaves. In some cases, the fungus can affect fruit, but this is very uncommon.

**Control:** *To treat rust, use a fungicidal regimen just prior to the fruit trees' bloom. The appropriate fungicides are the same used for brown rot.*



Rust lesions on plum leaf. Photo: Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org

**Black knot** – This fungal disease affects twigs and branches. The infection generally occurs in young growth of the plant. The symptoms are characterized by abnormal growth with brown swellings that break as they grow. At the end of the year, these lesions will become hard and brittle with a blackish coloration. Limbs and branches infected by this fungus will die within a year of infection. The tree may die if the infection is widespread.

**Control:** *Remove infected limbs and scaffolds. Never leave pruned wood under the tree. Most varieties are susceptible to this disease.*

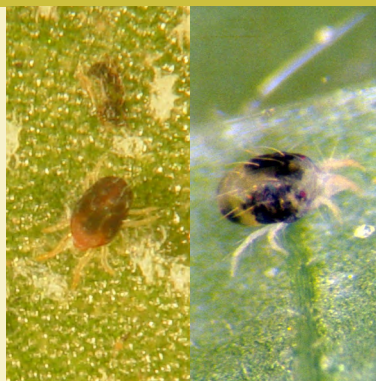


Black knot in plum. Similar symptoms in plum leaves. Photo: Joseph OBrien, USDA Forest Service, Bugwood.org

# Insects

**Red and two-spotted spider mites** – Trees with high mite populations will appear weak. Spider mites are small but will be visible on the underside of affected leaves.

**Control:** Natural predators like lacewings and ladybugs can be used. Insecticidal soaps and oils also work well, and coverage on the backsides of the leaves is critical. Continue to scout for these pests as multiple generations will occur each year.



Red spider mites (left)  
Photo: Chazz Hesselein, Alabama Cooperative Extension System, Bugwood.org  
Two-spotted spider mites (right)  
Photo: Frank Peairs, Colorado State University, Bugwood.org

**Plum curculio** – This insect can attack plums, peaches, and other cultivated and wild fruits. Adults overwinter under plant debris around the trees and become active after the weather warms up in the spring. They feed on buds, blossoms, leaves, and developing fruit. Premature fruit drop is caused by adults feeding and laying eggs.

**Control:** Apply approved insecticides during petal fall. Additional insecticides should be applied if new damage appears.



Plum curculio and fruit damage.  
Photo: Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org

**Aphids** – Affected leaves will become curled, small, and shiny, with green to yellow hues. The aphids will become more noticeable on the underside of the leaf. The growth of the tree can be affected by aphids. It is important to control aphids since the population can grow very quickly.

**Control:** Aphids can be treated using natural predators like green lacewings or lady beetles. During the dormant season, they can be treated with horticultural oil, neem oil, or insecticidal soap. Coverage on the backsides of leaves is critical.



Aphids in plum leaf.  
Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

**Japanese beetle** – These insects emerge from the soil at the beginning of June and start feeding on the leaves of plum trees. They sometimes eat everything except the veins of the leaf, which results in skeletonized structures.

**Control:** Removing damaged fruit from trees and from the ground can be very helpful in controlling these insects. Monitor for beetles and treat as needed with approved insecticides.



Japanese beetles in leaves.  
Photo: Sharon Dowdy, University of Georgia

# Long-Term Care

Growing plums in Georgia is not an easy task. You will have the best chance for success by properly preparing a site well ahead of planting. Proper tree selection, optimal fertilization, pruning, and watering will help to ensure a healthy tree. Pest management is also critical for producing both attractive fruit and ensuring that the trees are protected.

A summary of the most important activities is presented below:

- **Fertilization:** Fertilize plum trees to maintain growth and desired nutrient levels in the plant. In addition, to maintain optimal conditions in the soil for plant growth.
- **Pruning:** Prune plum trees to renovate fruiting wood and to optimize sprays and maintenance of trees.
- **Thinning:** Fruit thin plum trees to ensure larger fruit and a healthy crop.
- **Mulching or applying herbicide:** Mulch or use herbicide to prevent or to control weeds around the tree and preserve moisture.
- **Watering:** Irrigation is especially important during drought spells and when the fruit is present on the tree.
- **Preventing diseases and pests:** Preventive measures to control plant diseases and pests minimize possible damage to the flowers, foliage, fruit, wood, and roots of a plum tree.

For more in-depth explanations on the management of plum diseases, insect, and weed problems, [contact your local UGA Extension office](#).

*The original manuscript was prepared by Dario Chavez and Malgorzata Florkowska, UGA Department of Horticulture, Chunxian Chen, USDA-ARS Southeastern Fruit and Tree Nut Research Laboratory, and Jeff Cook, Taylor and Peach County Extension. Revised by Dario Chavez.*



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