UF UNIVERSITY of FLORIDA IFAS Extension

CIR461

Camellias at a Glance[1]

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Native to Asia, the first camellia plants were brought to America in 1797 and grown in New England greenhouses. Over the last 200 years, they have proven to be dependable additions to the southern landscape, where they grow and bloom with minimal care (Figure 1).There are numerous species of *Camellia*, but the types commonly grown as landscape shrubs in Florida are *Camellia japonica, Camellia sasanqua*, and hybrids of these. *Camellia japonica* typically grows larger and has bigger leaves and flowers than *Camellia sasanqua*. *Camellia reticulata, Camellia hiemalis, Camellia vernalis*, and their hybrids are less commonly used in landscapes. The young leaves of another species, *Camellia sinensis*, are processed for tea, one of the world's most popular drinks (see *Tea Growing in the Florida Landscape* at http://edis.ifas.ufl.edu/hs308).

Camellias can be grown successfully in most inland areas of North and Central Florida. Their success as a landscape plant is usually determined by soil type since they demand well-drained soils with an acidic pH. Special care with regard to soil modification and watering is necessary where these conditions don't exist and, in such cases, they are probably best grown in large containers. Camellias are long lived and function well as foundation plantings, screens, accent plants, background groupings, and hedges. Camellias flower in the fall and winter when few other plants are blooming. The Sasanqua-type camellias (*Camellia sasanqua, C. hiemalis, C. vernalis*) bloom the earliest (October–December), followed by *Camellia japonica* types (January–March). For the remainder of the year, their glossy, evergreen foliage, interesting forms and textures, relatively slow growth, and low maintenance make camellias excellent landscape plants worthy of more use.

Figure 1. Camellia flower
Credits: Harry P. Leu Gardens

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Figure 2. Camellia flower forms. From top left: single form, semi-double form, anemone form. From bottom left: peony form, formal double form, rose form double (flower opens to reveal stamens)
Credits: Leu Gardens. Rose form double: Sydney Park Brown

Selection of Varieties

Camellias can be purchased at nurseries, garden festivals, and camellia shows. Varieties range in plant size and form from compact to large and spreading to upright. A huge assortment of flower sizes, colors, and forms also exist, and new cultivars are introduced each year. Blooms vary in color from pure white to brilliant crimson, with many color combinations and patterns. Six flower forms are commonly recognized (Figure 2).

Another important characteristic of camellia flowers is their season of bloom. Midseason flowering varieties that bloom from November through January are best suited for Florida conditions. Warm fall temperatures may prevent early varieties from flowering properly. Late-blooming plants may start growing before the end of the flowering period, resulting in "bullnosing," which is characterized by flowers that do not open fully and may even drop while still tight buds.

Some good performers for Florida landscapes are listed in Table 1. Others, particularly heirloom varieties, also do well but are difficult to find in the trade. A comprehensive list with variety descriptions and images is available from the American Camellia Society (http://www.camellias-acs.com/default.aspx). Local camellia societies and their flower shows are excellent sources of information, and they often sell easy-to-grow and/or hard-to-find varieties. Noteworthy camellia collections are on display at Harry P. Leu Gardens in Orlando, Bok Tower Gardens in Lake Wales, and Alfred B. Maclay Gardens State Park near Tallahassee.

General Culture

Soils. Camellias prefer fertile, well-drained soils high in organic matter with a pH between 5.0 and 6.5. Soils that are too sandy or alkaline can be modified with soil amendments and fertilizer to make them more suitable for camellias. Another option is to grow camellias in large containers.

Exposure. Camellias perform best in partially shaded locations with good air movement. Dense shade may result in sparse foliage and poor flowering. Plants exposed to full sun may appear yellow green in color but may yield more flowers than plants in heavy shade. They are cold hardy but should be protected from cold winds.

Planting. Camellias are best planted from November to February so the roots can become established before the heat of summer. Late spring or summer planting is possible if extra care is provided. Very sandy soils should be amended by mixing 3–6 inches of organic matter into the top 12 inches of soil. The entire planting bed, rather than individual planting holes, should be amended if possible. The planting hole should be two to three times wider and

slightly shallower than the root ball. When planted, the root ball should be 1–2 inches above the soil line to allow for sinking. Camellias cannot tolerate being planted too deeply. A 2–3-inch layer of mulch insulates the root system and conserves moisture in the root zone. Avoid placing mulch over the root ball to allow for air exchange. Plants should be spaced according to their mature size and rate of growth, usually at least 5 feet apart.

Fertilization. Camellia enthusiasts who compete in flower shows typically fertilize their plants four times a year. However, camellias growing on a suitable site perform well with significantly less fertilizer. One or two applications a year should be adequate. Use a fertilizer containing equal amounts of nitrogen and potassium (the first and third numbers on the fertilizer tag) and low phosphorus (the middle number).

The rate should be about half a pound of 12-4-12 or 15-5-15 (or similar fertilizer) per 100 square feet of planting area in spring and/or early summer. Late summer or fall fertilization may cause tender growth, which may be injured by early cold periods. Water the plants before and after fertilizer applications. Acid-forming "Azalea & Camellia" fertilizer should only be used on camellias established in the landscape (i.e., not young or containerized plants).

Camellias growing on alkaline pH soils often appear chlorotic (yellow) because of deficiencies in micronutrients like iron, manganese, and zinc. Micronutrient sprays applied to the foliage or the soil may correct the problem temporarily.

Watering. Camellias are fairly drought tolerant but need irrigation during extended dry periods when 1 inch of water should be applied every 10 days to 2 weeks. Camellias also need 1 inch of water per week during flowering. They are sensitive to overwatering and succumb to root rot when kept too wet.

Pruning. Camellias typically need minimal pruning. Necessary grooming and shaping should be done in late winter or very early spring after blooming. Pruning in late summer or fall removes flower buds, but selective removal of undesirable branches can be done to retain a neat shape. Shearing should be avoided because it destroys the natural plant form and results in a dense layer of foliage that blocks light from the interior branches.

Propagation. The most common and easiest methods of propagating camellias are by cuttings and air layering. Rooting plants from cuttings ensures that plants retain the characteristics of the parent plant. Cuttings are usually taken in July from hardened spring growth.

Air layering is a simple propagation method that allows one to produce a good-sized, "true to type" plant in a short amount of time. A ring of bark is removed from a pencil-sized stem, and moist sphagnum moss is wrapped around the wound. Roots grow into the moss and the rooted stem can be cut from the mother plant and then potted to allow for further root growth. Once they are well rooted in the container, they can then be planted into the landscape. Air layers should be started in April and will be ready by August.

Grafting is used to propagate varieties that have desirable characteristics, such as exceptional flowering, but a weak root system. Grafting permits the union of the desired top (scion) with a vigorous root system (root stock) to yield a superior plant. Seed propagation results in tremendous seedling variation with a high percentage of undesirable seedlings. Seeds should be collected as soon as they are ripe (July–September) and placed in flats or pots. Germination can be expected in 2–4 months if the seed coat is broken or scarified before sowing.

For detailed information on these techniques, see *Propagation of Landscape Plants* (http://edis.ifas.ufl.edu/mg108).

Disbudding and "Gibbing." Some camellia growers enjoy competing in flower shows and manipulate the flower buds to achieve larger and earlier flowers. This involves removing competing flower buds and applying gibberellic acid (a plant hormone). Details on this technique can be found at the American Camellia Society website (http://www.camelliasacs.com/default.aspx).

Pests

Insects and Mites. Camellias are generally low-maintenance plants, but a few pests can sometimes be problematic, the most common being tea scale, aphids, and spider mites.

Tea scale (Figure 3) is the most common scale on camellia. Scales generally feed on the underside of leaves and may not be noticed until large populations have developed. Identification and management information for tea scale can be found at http://edis.ifas.ufl.edu/in522.

Aphids injure camellias by sucking juices from young leaves. Injured leaves curl and become distorted. Aphids secrete a sticky substance called honeydew, which is an excellent medium for sooty mold, a black growth that grows

Figure 3. Tea scale (on left); spider mite injury (on right)
Credits: Harry P. Leu Gardens

on the upper surface of leaves and becomes a cosmetic problem if the insects are not managed. See Ornamental Insects Sheet 2 (http://edis.ifas.ufl.edu/in024) for more information.

Spider mites (Figure 3) are tiny pests generally found on the underside of leaves. The tops of infested leaves soon display a rusty or reddish speckling of the green surface. Spider mite infestations usually appear during hot, dry conditions and in areas of the landscape with poor air circulation and little exposure to rainfall. See *Ornamental Insects Sheet 1* (http://edis.ifas.ufl.edu/in023) for more information.

Specific management information on the above insects can be obtained from your local county Extension office (http://solutionsforyourlife.ufl.edu/map/).

Diseases. Camellias that are correctly planted and cared for rarely develop serious disease problems, but known diseases of this plant include leaf spot, dieback, leaf and bud gall, and root rot.

Leaf spots vary in size and shape depending upon the species of fungi causing the problem, but the fungi do little damage and usually only attack leaves injured by another means. Attention should be given to improving general cultural practices if leaf spots appear.

Dieback is most common during the spring months and is characterized by wilt and sudden death of new twigs. Older branches can also be infected but usually die more slowly. The leaves characteristically remain on the branches for considerable lengths of time after they die.

The best dieback control is sanitation. The fungus causing this problem is inside the stem and is not satisfactorily controlled by fungicides. Diseased branches should be removed about 6 inches below the lowest visible symptoms of disease. Pruning tools must be sterilized after each cut with an antiseptic, such as 10% chlorine bleach or Lysol® solution. Removed branches should be destroyed and not recycled in the landscape.

Leaf and bud galls appear as thickened and enlarged leaves or buds during the cool spring months. One or several leaves on a single shoot may be affected. Control can be accomplished in the home garden by simply pinching off and destroying infected leaves. Disease activity usually stops with the advent of warm weather.

Camellias are occasionally attacked by root rot. The entire plant or a section of the plant gradually weakens and dies. It is not possible to control this disease once the plant has been attacked. Infected plants should be removed and destroyed. Since the disease is soilborne, soil treatments are necessary before replanting. Fungicide recommendations can be obtained from your local county Extension office (http://solutionsforyourlife.ufl.edu/map/)

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Table 1. Camellia varieties for Florida landscapes

Variety	Flower color	Season of flower	Flower size and form	Plant form	Growth rate	Comments
***Camellia japonica* and hybrids**						
Charlie Bettes	White	Early	Large to very large, semi-double	Compact	Vigorous	
Debutante	Light pink	Early to midseason	Medium, full peony	Upright	Vigorous	Heirloom, prone to leaf drop when young
Delores Edwards	Light orchid pink	Early to midseason	Large, semi-double to anemone to peony	Upright	Medium	Non-reticulata hybrid
Early Autumn	Lavender rose	Early to midseason	Medium, formal double	Upright	Medium	
Gigantea	Red marbled white	Midseason	Large to very large, semi-double anemone to peony	Open	Vigorous	Very large flowers, hard to find
Kramer's Supreme	Red	Midseason	Large to very large, full peony	Compact, upright	Vigorous	Fragrant
Mathotiana	Red	Midseason to late	Large to very large, rose form double	Compact, upright	Vigorous	Heirloom, available with different flower forms and colors
Pink Perfection	Shell pink	Early to late	Small, formal double	Upright	Vigorous	Heirloom, difficult to establish
Pope John XXIII	White	Midseason	Medium to large, formal double	Upright	Vigorous	
Professor Sargent	Red	Midseason	Medium, full peony	Compact, upright	Vigorous	Withstands direct sun
Rena Swick	Pink with darker veins	Midseason	Large, semi-double	Upright	Medium	Variegated flower form exists
Royal Velvet	Red	Midseason	Large, semi-double	Compact	Medium	
Sea Foam	White	Late	Medium to large, formal double	Upright	Vigorous	
Sweetie Pie	Pink	Early to midseason	Large to very large, semi-double	Upright	Vigorous	Occasional red stripes on petals
Taylor's Perfection	Light pink	Midseason to late	Very large, semi-double	Open, upright	Average	Non-reticulata hybrid
Walter Bellingrath	Light to rose pink	Midseason to late	Large, loose peony to anemone	Spreading	Vigorous	Grows in full sun
***Camellia reticulata* and hybrids**						
Dr. Clifford Parks	Red	Midseason to late	Very large, semi-double to peony	Upright	Average	Always a good performer
Frank Houser	Red, variegated form available	Early to midseason	Very large, semi-double to peony	Spreading, open, upright	Vigorous	Best *C. reticulata* for Florida, but hard to find
***Camellia sasanqua, C. hiemalis, C. vernalis,* and hybrids**						
Bonanza	Red	Early	Medium, semi-peony	Upright, dense	Vigorous	
Cleopatra	Rose to light pink	Early	Medium, semi-double	Compact, upright	Vigorous	Also known as Sawada
Cotton Candy	Clear pink	Early	Medium, semi-double	Spreading, loose, upright	Medium	
Jean May	Shell pink	Early	Large, rose form double	Compact, upright	Slow	May be difficult to find
Kanjiro	Rose	Early	Small to medium, semi-double	Upright	Vigorous	

Mine-no-yuki	White	Early	Small, semi-double to loose peony	Spreading, willowy	Medium to vigorous	Profuse bloomer, also called Snow on the Mountain
Setsugekka	White	Early	Large, semi-double	Large, upright	Vigorous	Good understock for grafting
Sparkling Burgundy	Rose pink	Early	Small to medium, peony	Upright, compact	Vigorous	
Stephanie Golden	Hot pink	Early to midseason	Medium, semi-double	Upright, dense	Vigorous	
Shishi-gashira	Red	Early	Small, semi-double to rose form double	Dwarf	Medium	
Yuletide	Red	Early	Small, single	Compact, upright	Medium	Prominent yellow stamens
Fragrant hybrids						
Cinnamon Cindy	Rose pink with white center	Early to midseason	Small, peony	Upright to spreading	Medium	Cinnamon fragrance, non-reticulata hybrid
Fragrant Pink	Deep pink	Early to late	Miniature, peony	Spreading	Medium	Non-reticulata hybrid
High Fragrance	Ivory pink with rose edges	Midseason	Medium, peony	Open	Vigorous	
Sweet Emily Kate	Light pink	Midseason to late	Medium, peony	Pendulous	Slow	Non-reticulata hybrid