Horticulture Information Leaflet 8625 7/98



SMOOTH AND OAKLEAF HYDRANGEAS

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Two hydrangea species are native to the southeastern United States — *Hydrangea arborescens* and *Hydrangea quercifolia*. Both are bold-textured, deciduous shrubs which produce small, fertile flowers. Many selections are considered more gardenworthy than the native species because they display large, sterile florets.

Hydrangea arborescens, commonly called wild or smooth hydrangea, will achieve a height of 3 to 4 ft and a spread of 3 to 5 ft. The flowers are displayed atop vigorous canes in mid-summer. The flowers start green, turn white, then brown and persist on the plant for some time. Because flowers appear uniformly at the same height, plants are often managed by pruning back to near the soil surface in winter or immediately after flowering in mid-summer.

The cultivar with the largest (sometimes over a foot in diameter) and most uniform inflorescene of sterile florets is Annabelle. A similar plant having large but less uniform sterile flower heads is *Hydrangea arborescens* var. *grandiflora* sold as 'AG' or 'Hills of Snow'. A subspecies called *H. radiata* has silver-colored leaf backs but does not possess large heads of sterile florets. However, *H. radiata* often displays a few sterile florets surrounding fertile flowers to form a lace-cap flower form common in other species of hydrangea. Plant breeders are currently attempting to develop a pink and double flowered *H. arborescens* as well as a hortensia (mop head) flowered *H. radiata*.

Flower heads can be used as fresh flowers during the summer or harvested and hung upside down to dry in dark, well ventilated areas. Dried flower heads are popular in fall and winter floral designs.

Hydrangea quercifolia is commonly called oakleaf hydrangea because the leaves are shaped like oak leaves. It often has many fertile flowers mixed with sterile florets. Cultivars of *H. quercifolia* have a higher proportion of sterile florets. Panicles of flowers are produced in mid-summer. Flowers open creamy white then fade through pink and green to brown. If harvested at a particular color stage and hung upside down in a dark, well-ventilated area to dry, the flowers will retain some of their original color.

Oakleaf hydrangea can be grown in sun or shade and prefers a rich, moist soil. Height, foliage size, and fall color will vary dramatically depending upon growing conditions. Leaves are 4 to 6 inches long, hairy, and turn purple in autumn when grown in full sun but may be tissue paper thin, well over a foot long, and turn orange-red in autumn when grown in deep, moist shade in the mountains. Shade is required in the piedmont and coastal plain with the most attractive plants grown in shade throughout North Carolina. Height varies from 3 to 8 ft;

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North Carolina Cooperative Extension Service NORTH CAROLINA STATE UNIVERSITY COLLEGE OF AGRICULTURE & LIFE SCIENCES occasionally taller. The irregular spreading shrub can reach $8\,\mathrm{ft}$ in width.

The most popular cultivars are Harmony, Alice, and Alison. 'Alice' is a vigorous cultivar with white flower heads over a foot long. A more compact, smaller cultivar is Snow Queen. It produces pure white 8-inch flower heads that gradually turn pink. 'Snow Flake' has large, hose-in-hose double flowers that open white but have dark pink sepals. 'Pee Wee' and 'Sykes' are compact forms only reaching about 3 to 4 ft tall at maturity.

Culture

H. arborescens can be grown in full sun or light shade while *H. quercifolia* is best grown in partial to full shade. Both will grow in normal to moist soils with a 3- to 4-inch layer of mulch. Hot, dry sites should be avoided. Occasional insect and disease pests will attack either species, but pest control is rarely warranted on properly sited plants. Transplanting is relatively easy and the growth rate is rapid.

Fertilizer needs are minimal. Care should be taken to establish a soil pH between 5.5 and 6.5 and adequate levels of nutrients based upon soil test results prior to planting. An annual maintenance application of 1 lb of actual nitrogen per 1,000 ft²($1\frac{1}{2}$ ounces of 10-10-10 per 10 ft²) should be applied in late winter beginning the year following planting. Pruning, when necessary, should be done immediately following flowering or during winter for *H. arborescens*. Pruning *H. quercifolia* too late in the season may prevent flowering the following year; most pruning is done immediately after flowering with no more than one-third of the total growth removed in any year.