'Chuck Hayes' Gardenia

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Gardenia jasminoides Ellis, an evergreen shrub native to China but grown in the southern United States, is one of about 60 subtropical species of the genus *Gardenia*. *Gardenia jasminoides* is a variable species that grows from 0.6 to 1.8 m tall with 10-cm-long leaves and 8-cm-diameter flowers. Synonymous names are cape jasmine, *G. florida* L., *G. radicans* Thunb., and *G. augusta* Merr. According to Bailey (1949), the gardenia, commonly known as *G. veitchii*, is a presumed selection of the cultivar *Fortuniana* Lindl. (*G. fortunei* Hort), which also belongs to this species. Gardenia is interesting to southern landscapers because it is a compact evergreen shrub with fragrant, white flowers and glossy, dark-green leaves. Gardenia is attractive to the nursery industry because it is easy to propagate from cuttings and grow in containers. However, *G. jasminoides* lacks hardiness. It is reliably grown in portions of the U.S. Dept. of Agriculture's plant hardiness zone 7b but not in 7a. Being a variable species, some cultivars are harder than others, but the hardest local survivor has been single flower.

Origin

Gardenia jasminoides 'Chuck Hayes' originated as a seedling from cross pollination between a double-flowered and a hardy, single-flowered gardenia plant owned by Charles Hayes of Cavalier Nursery, Virginia Beach, Va. Both parents were unnamed plants of *G. jasminoides*. 'Chuck Hayes' is an exceptional plant that was selected from 400 seedlings. It was named in honor of the late Charles Hayes, a prominent Virginia nurseryman.

Description

'Chuck Hayes' is a compact evergreen shrub with a mature (10 years old) width and height of 1 to 1.2 m. Leaves are glossy, dark-green, and medium sized (2.5-5 cm long and 2-2.5 cm wide). Leaves are shorter and wider than those of typical gardenia plants. Flowers are double and 5.0-7.6 cm in diameter. Their fragrance and white color are typical of the species. Flower diameter is variable in *G. jasminoides*, ranging from 2.5 to 10 cm, and appears to be related to leaf size, with large-

leaved plants having larger flowers than small-leaved plants. Flowers of 'Chuck Hayes' are intermediate in size and full in appearance because of their broad corolla lobes. Gardenia flowers have the typical salverform flower of Rubiaceae with five to 11 corolla lobes. *Gardenia jasminoides* is reported as having five lobes (Bailey, 1949), and *G. jasminoides* 'Chuck Hayes' has six lobes, though some deviation from these counts occur. Double flowers have additional variably sized petaloid stamens inserted on the corolla throat, giving an appearance similar to a double-flowered rose or camellia. 'Chuck Hayes' is a prolific flower producer, bearing during June and again during September and October.

Performance

Propagation. Plant populations grown from seed are variable; therefore, single plant selections must be propagated vegetatively. 'Chuck Hayes' cuttings begin initiating roots after 2 weeks of propagation, which is generally comparable to *G. jasminoides* plants. Cuttings were 7-20 cm long and taken from summer or winter dormant plants. They were inserted in a well-drained medium and propagated with ventilated high humidity (Humidifan; Jaybird Manufacturing, Centre Hall, Pa.).

Flowering. The aesthetic value of a gardenia plant is greatly increased by the length of its flowering season. The seedling undervaluation segregated for the short-daylength response. Some of the 400 seedlings terminated growth in response to short days and others did not. 'Chuck Hayes' continued to grow under short days and flowered when cool nights returned in the fall. Therefore, in addition to a long spring flowering season, 'Chuck Hayes' continues to flower during the fall (September and October) until shoot growth is stopped by winter temperatures. Its flowering was superior to that of the next five best plants in the seedling population (Fig. 1).

Cold hardiness. Unprotected, field-grown, seedling plants were rogued for cold injury during the first year after field planting when plants were juvenile and most susceptible to cold injury. The remaining seedlings were rogued the following spring for flower type. Fifty double-flowered plants remained and were tested under laboratory conditions (Sakai et al., 1986) for hardiness during December, January, and March. Three seedlings were hardy in all three tests, but two were daylength responsive and produced few flowers. The remaining plant was compared to 'August Beauty' and 'Veitchii' for hardiness. 'Veitchii' was completely killed and leaves of 'August Beauty' were injured at -15C. 'Chuck Hayes' survived with minimal injury. In afield planting, a December frost with a minimum of -15C and a strong northwest wind severely injured the foliage and wood of 'August Beauty', but 'Chuck Hayes' survived, except for a few injured leaves on the windward side. 'Chuck Hayes' has been field-grown since 1985 at the Hampton Roads Agricultural Research and Extension Center, which is on the border of zone 8a and occasionally receives zone 7 weather conditions (Cathey, 1990). No injury has been observed. We expect 'Chuck

Fig. 1. Flowering of five select gardenia seedlings (mean) and 'Chuck Hayes'.

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Fig.2. 'Chuck Hayes' gardenia.

Hayes' to be winter hardy in southeastern Virginia and similar climates.

Availability

Prolific flowering and increased cold hardiness are expected to stimulate the use

'Chuck Hayes' as a landscape plant. The Hayes family is seeking patent protection for 'Chuck Hayes' in cooperation with the Virginia Nurserymen's Association. Plants are available from selected Virginia nurseries. Further information on availability can be obtained of from D.C.M.

Literature Cited

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