‘Leprechaun’ *Aglaonema*

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The genus *Aglaonema* (family Araceae), commonly referred to as Chinese evergreens, has been an important tropical foliage crop since the 1930s (Smith and Scarborough, 1981). The first commercial *Aglaonema* cultivars were plants collected from their native tropical habitats, propagated, and sold as ornamentals. Plant breeding research to induce *Aglaonema* flowering (Henny, 1983) and to control pollination (Henny, 1985) made hybrid seed production protocols available. These breeding innovations led to the introduction of many new *Aglaonema* hybrid cultivars in the past 20 years by both public and private breeders worldwide. Ten *Aglaonema* cultivars have been released by the Foliage Plant Breeding Program at the Mid-Florida Research and Education Center in Apopka, FL, and have become commercially successful (Henny and Chen, 2001, 2008, 2009, 2010; Henny et al., 1988, 1992a, 1992b, 2003, 2008). We here describe ‘Leprechaun’, the eleventh *Aglaonema* cultivar to be developed and released.

Origin

Aglaonema ‘Leprechaun’ is a whole stem mutation found in a large population of *Aglaonema* × ‘Silver Bay’. The mutant was initially elected as a result of its small, rounded plant form. It exhibited the same foliar variegation pattern as the parent *Aglaonema* × ‘Silver Bay’ but it was a dwarf and more highly branched compared with the parent plant. *Aglaonema* ‘Leprechaun’ was isolated, propagated by tip cuttings, and evaluated during a 3-year period, after which the mutation was determined to be stable and suitable as a new cultivar.

Description

Aglaonema ‘Leprechaun’ has a compact and symmetrically rounded plant habit. New leaves are initially upright and then arch outwardly and downwardly with development. Average mature leaf length is ≈20 cm and width is ≈7 cm. Plants branch well, averaging over 10 basal shoots per cutting. In contrast, the mean canopy height of ‘Silver

Bay’ is 33 cm versus a 55-cm canopy width, its leaves average 30 cm in length and 11.5 cm in width, and plants average 3.5 basal shoots (Henny et al., 1992a).

The color descriptions that follow are based on The Royal Horticultural Society color chart (Royal Horticultural Society, 1995). The upper surfaces of mature, fully expanded leaves are yellow-green 147A to green 137A. The center area of the leaf is grayed-green 191B–C and extends out from the midrib toward the leaf edge more than half way on each side. The midrib itself is grayed-green 191A. The primary veins are grayed-green 191B–C. The lower surface of fully expanded leaves is yellow-green 147B. The lower surface midrib color is yellow-green 147C and the lower surface venation is yellow-green 147B. The overall petiole color is yellow-green 147C–D, whereas the petiole area adjacent to the stem is white 155C. Color of the inner petiole wing is yellow-green 147D, whereas the outer petiole wing surface is lighter yellow-green 147C–D.

Fig. 1. *Aglaonema* ‘Leprechaun’ grown in a 1.6-L pot showing dense basal-branching habit. This plant was grown from a single rooted cutting and was photographed after being greenhouse-grown for 9 months.

Performance

Growth tests were initiated using 12- to 15-cm long tip cuttings that held three to four leaves each. Cuttings were harvested from *Aglaonema* ‘Leprechaun’ stock plants grown in a shaded greenhouse and stuck in 50-celled trays containing Fafard #2 Mix (Conrad Fafard, Inc., Agawam, MA; 55% Canadian peat:25% perlite:20%vermiculite). The cuttings were placed inside a propagation tent (maximum irradiance of 80 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$) for 8 weeks. The rooted cuttings were allowed to acclimatize for 2 additional weeks. At that time, 30 uniform rooted liners were selected and potted into 1.6-L pots using the same Fafard #2 soil mix. Plants were grown in a randomized block experimental design in a shaded greenhouse under a maximum irradiance of 125 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ in a natural photoperiod and a temperature range of 15 to 34 °C. Plants were grown using 3, 5, or 7 g per container of Nutricote Plus 18N–2.6P–6.6K (Chisso-Asahi Fertilizer Co., Ltd., Tokyo, Japan). Ten plants per each fertilizer treatment were grown in a completely randomized design for 9 months. Plants were hand-watered as necessary and fertilizer was reapplied every 3 months.

Data recorded at termination of the study included canopy height, canopy width, length and width of largest leaf, number of basal shoots, and a visual quality rating where 1 = poor; 2 = fair (not saleable); 3 = acceptable (saleable); 4 = good quality; and 5 = excellent quality. Finished plants were moved into an interior growth room for 3 months under a light level of 25 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ for 12 h daily at a constant 24 °C. A second visual quality rating was measured after 3 months in the interior growth room conditions. Data were analyzed using analysis of variance procedures of the SAS program (SAS Institute Inc., Cary, NC).

Results

Aglaonema ‘Leprechaun’ grown in 1.6-L pots reached marketable size in 9 months. There were no significant differences in canopy height, canopy width, pulled-up height, leaf width, and number of basal shoots and plant quality between fertilizer levels (Table 1). There was a significant linear decrease in leaf length as fertilizer levels increased; however, the differences had no visual effect on

Table 1. Canopy height and width, length and width of largest leaf, number of basal shoots, and visual quality of *Aglaonema* ‘Leprechaun’ after 9 months’ growth in 1.6-L pots.

Nutricote g/pot/3 months	Canopy		Largest leaf		No. basal shoots	Visual quality ^z
	Ht (cm)	Width (cm)	Length (cm)	Width (cm)		
3	23.6	38.8	20.1	7.6	11.1	4.8
5	22.8	39.1	19.5	7.2	10.1	4.5
7	22.6	36.6	18.7	7.0	10.6	4.5
Significance ^y	NS	NS	L*	NS	NS	NS

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^zVisual quality where 1 = poor, 2 = fair, 3 = saleable, 4 = good, and 5 = excellent quality.

^yRegression analysis in which NS = non-significant, L* = linear significance at 5% level.

appearance or quality. Plant quality rating averaged good to excellent at all nutritional levels. After 3 months of interior room testing, all plants graded out as excellent (data not presented).

Availability

Aglaonema 'Leprechaun' is trademarked and patented by the U.S. Patent and Trademark Office (PP 19,714). Plant patent rights are assigned to the University of Florida, Board of Trustees. Stock plants will be released under license to Florida growers for propagation and the variety is intended for commercial producers growing finished plants in 1.6- or 3.9-L containers. Inquiries regarding licensing may be sent to Florida

Foundation Seed Producers, Inc., P.O. Box 110200, Gainesville, FL 32611.

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