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ENH1101

New Florida Foliage Plant Cultivar: Aglaonema 'Stripes'[1]

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Origin

Aglaonema are members of the plant family Araceae, and are commonly called Chinese evergreens. They are indigenous to Southeast Asia and include 21 species. *Aglaonema* species and cultivars are valuable ornamental foliage plants because of their tolerance of environmental conditions in commercial and residential interiorscapes.

Historically, new *Aglaonema* cultivars were introduced by collecting specimens from the wild. These were largely open-pollinated variants of *Aglaonema crispum*, *A. commutatum or A. modestum*. Over the past twenty years, both public and private breeders have produced many new hybridized varieties due to control of Aglaonema flowering (Henny; 1983) and development of pollination techniques (Henny; 1985).

Aglaonema X 'Stripes' resulted from a cross of *Aglaonema* X'Manila' and A. nitidum 'Curtisii'. *Aglaonema* X 'Stripes' combines the foliar variegation patterns of both 'Manila' and 'Curtisii' and is intermediate in size between the two parents. The foliar variegation of 'Stripes' consists of strong bands of silvery white coloration along the lateral veins, overlaying a fainter, more diffuse pattern in the same area (Figure 1). Leaves average about 2.5 times as long as wide and may reach 35 cm in length.

Figure 1. Mature *Aglaonema* X Stripes growing in 2-gallon pots in a Florida foliage plant nursery.

Performance

Growth characteristics of Aglaonema X 'Stripes' were determined in three replicated greenhouse trials over a two-year period. Tip cuttings 6 inches (15 cm) long were rooted directly in 6-inch (1.6L) pots filled with a growing medium of 3:2 Canadian peat: Perlite by volume. The soil was amended with 0.9 kg•m^{-3} of Micromax (Sierra Chemical Company, Milpitas, CA) and 4.1 kg•m^{-3} dolomite. Three growth trials were conducted. In all three tests, plants were grown under two shade levels adjusted to 125 and 250

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µmol•s^{-1}•m^{-2} maximum light intensities and were supplied three fertility levels consisting of 840, 1680, 2525 kg N ha/year, equivalent (2.2, 4.4, or 6.6 g 19N- 6P_2O_5 – 12 K_2O/pot every three months). Plants were grown in greenhouses under natural photoperiods and a controlled temperature range of 15 - 34°C (63 - 97°F).

In these trials, Aglaonema X 'Stripes' reached marketable size in seven - 10 months, depending on season (Tables 1 and 2). Light level had little influence except that plants grown under 125 µmol•s^{-1}•m^{-2} were darker green (Table 1). The best fertilizer rate was between1680 and 2525 mg N/ha/year or 7.1 - 14.2g (19N-3P-10K)/150-mm pot every three months. Overall, plant quality and color grade was better as fertilizer levels increased. Basal shoot production was not affected by fertilizer.

Plants from Trial II were subjected to two weeks of simulated shipping (no light, no water, 15°C) and then held in a growth room at 14.4 µmol•s^{-1}•m^{-2} light intensity, 12 hoursper-day for six weeks and hand watered as necessary to simulate an interior environment. The leaves of *Aglaonema* X 'Stripes' became darker in the green field, which contrasted the silvery white variegation pattern more sharply. Thus overall plant quality improved during these shipping and interior tests. Data from only two trials is presented here. For more information, see Henny et al. 1988.

Recommendations

Aglaonema X 'Stripes' is intended for commercial foliage producers growing 6-inch (1.6L) or 8-inch (3.9L) containers. Best growth can be expected when plants are grown with a light intensity of 125 µmol•s^{-1}•m^{-2} (equivalent to 80% shade).

Availability

Aglaonema X 'Stripes' has been trademarked by the Florida Foundation Seed Producers, Inc. and has been released to Florida tissue culture labs for propagation and distribution. Inquiries regarding participating labs may be obtained by writing the Florida Foundation Seed Producers, Inc., P.O. Box 309, Greenwood, FL 32443.

References

Henny, R.J. 1983. Flowering of *Aglaonema commutatum* 'Treubii' following treatment with gibberellic acid. HortScience 18:374.

Henny, R.J. 1985. In vivo pollen germination of *Aglaonema* affected by relative humidity. HortScience 20:142-143.

Henny, R.J., R.T. Poole and C.A. Conover. 1988. 'Stripes' *Aglaonema*. HortScience 2395):920-921.

Table 1. The effect of light intensity and fertilizer rate on growth and quality of *Aglaonema* x Stripes after growing in a greenhouse for seven months from June -until January.

Light Intensity ($\mu mol \cdot s^{-1} \cdot m^{-2}$)	Canopy Height (cm)	Leaf Length (cm)	Leaf Width (cm)	No. Basal Shoots	Visual Color Grade[z]	Visual Plant Quality[y]
125	56	33	12	3.3	4.5	4.0
250	56	33	12	4.4	3.8	4.1
Significance[x]	NS	NS	NS	L**	L**	NS
Fertilizer Rate						
840	54	32	12	3.4	3.5	3.6
1680	57	33	12	4.1	4.4	4.4
2525	57	34	13	4.1	4.7	4.2
Significance[x]	L*	L*	L*	NS	L**	L*

[z]Visual color grade where 1 = poor, 3 = good, light green, and 5 = excellent, dark green and yellow contrast.

[y]Visual quality where 1 = poor quality, not salable; 3 = good quality salable, and 5 = excellent quality.

[x]Significance where NS, * and ** equal not significant and significant at 5% and 1* level, respectively; L = linear and Q = quadratic.

Table 2. Evaluation of light intensity and fertilizer rate on growth and quality of *Aglaonema* x Stripes. Plants were greenhouse grown for 10 months from December - October.

Light Intensity ($\mu mol \cdot s^{-1} \cdot m^{-2}$)	Canopy Height (cm)	Leaf Length (cm)	Leaf Width (cm)	No. Basal Shoots	Visual Color Grade	Visual Plant Quality
125	51	32	13	3.4	3.8	3.9
250	50	31	13	3.7	3.2	3.7
Significance	NS	NS	NS	NS	L**	NS
Fertilizer Rate						
840	50	31	12	3.1	3.2	3.3
1680	51	32	13	3.5	3.6	3.6
2525	51	32	13	4.1	3.6	3.8
Significance	NS	NS	L**	NS	L**Q**	L**

[z]Visual color grade where 1 = poor, 3 = good, light green, and 5 = excellent, dark green and yellow contrast.

[y]Visual quality where 1 = poor quality, not salable; 3 = good quality salable, and 5 = excellent quality.

[x]Significance where NS, * and ** equal not significant and significant at 5% and 1* level, respectively; L = linear and Q = quadratic