summer-grown plants. Plants in Experiment 1 were grown during the summer when light intensity and temperatures were highest, and production completed in the fall under lower light and temperature conditions; whereas, plants in Experiment 2 were grown during winter and spring when light intensity and temperatures were lower, but were sprayed in summer under a higher light–temperature regime. During Experiment 1, maximum day/night temperatures averged 37°/20°C for June–September and 29.4°/10° for October–November; monthly from February to June they were 27°/3.3°, 32°/2.7°, 33°/9°, 36°/15°, and 37°/14°, respectively. PAR averaged 2000 μmol $m^{-2}s^{-1}$ at midday during summer months and 1000 μmol $m^{-2}s^{-1}$ during winter months. *Ficus* completing production under the higher light and temperature regimes of summer months had a higher natural LCP than those shipped in the fall. Shine compounds used during the summer increased LCP more than those used on plants having a lower initial LCP.

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Flowering of *Aglaonema commutatum* 'Treubii' following Treatment with Gibberellic Acid

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Abstract. ***Aglaonema commutatum* Schott 'Treubii' sprayed once with 100, 200, or 400 mg/liter gibberellic acid (GA_3) in December flowered about 143 days after treatment. Significantly more flowers were produced at the 400-mg/liter treatment than at 100 or 200 mg/liter.**

Aglaonema species (*Araceae*) are important tropical foliage plants because of their adaptability to low light and humidity levels encountered under interior conditions. Diversity in plant size, growth habits, and foliar variegation patterns make *Aglaonema* an attractive genus for breeding and genetic studies. However, a lack of information concerning chromosome numbers, the presence of dichogamy and apomixis, the small number of pistillate flowers per inflorescence, and unpredictable flowering schedules have hampered breeding efforts.

Previous work has shown that several members of the Araceae flower in response to treatment with gibberellic acid (1, 2, 3, 4, 5, 6). *Dieffenbachia* flowered uniformly and produced more flowers as GA_3 concentration increased from 250 to 500 mg/liter (3). Flowers appeared normal and were fertile. This study was conducted in an attempt to induce uniform flowering of *Aglaonema commutatum* 'Treubii' using GA_3 treatment.

Thirty-six established single-stemmed plants growing in 20-cm pots containing a 2 sphagnum peat moss : 1 pine bark : 1 cypress shavings (by volume) medium, amended with 4.2 kg/m^3 dolomitic limestone, 1.8 kg/m^3 Micromax (micronutrient source), and 5.9 kg/m^3 14N–6P–12K Osmocote, were sprayed once on the upper and lower leaf surfaces until runoff (about 200 ml per plant) with 0, 100, 200, and 400 mg/liter of GA_3 in December 1981. Tween 20 at 0.5 ml/liter was used as a wetting agent. Plants were maintained under normal photoperiod in a shaded greenhouse at 180–200 μmol $m^{-2}s^{-1}$ light, with a temperature regime of 18°C night and 35° day. There was one plant per experimental unit and 9 replications per treatment in a randomized block design. The number of days to opening (determined by unfurling of the spathe) of the first inflorescence and the total number of inflorescences per plant were determined.

All plants sprayed with GA_3 had at least one open inflorescence within 148 days after treatment (Table 1) but there was no significant difference in mean number of days to flower among the 100, 200, and 400 mg/liter concentration of GA_3. One of 9 untreated control plants produced 3 blooms during the same period while none of the others showed any sign of flowering when the experiment was terminated after 165 days. Plants receiving the 400 mg/liter GA_3 treatment produced a mean of 6.7 blooms per stem, which was significantly higher than the 4.7 or 5.3 produced at 100- and 200-mg/liter treatments, respectively. All flowers were normal in appearance and produced pollen.

Table 1. Effect of a single gibberellic acid (GA_3) treatment on number of days to flower and number of inflorescences per plant of *Aglaonema commutatum* 'Treubii'.

GA_3 concn (ppm)	Mean days to first bloom[z]	Mean no. inflorescences
0	---[y]	0.3 a[y]
100	144 a	4.7 b
200	143 a	5.3 b
400	142 a	6.7 c

[z]Days after treatment until first inflorescence opened.
[y]One of 9 control plants flowered after 143 days, with 3 blooms. Mean separations within columns by Duncan's multiple range test, 5% level.

Although not included in the above experiment, stock plants of *Aglaonema rotundum* N.E. Br., *A commutatum* (Schott) Nicols. 'Tricolor', *A. nitidum* (Jack) Kunth *curtissii*, *A. pictum* (Roxb.) Kunth 'Tricolor', *A. crispum* (Pitcher & Manda) Nicols. 'Chartreuse Halo', *A.* X 'Manila', and *A.* X 'Abidjan' flowered within 5 months after a single treatment with 250 mg/liter GA_3. These plants flowered simultaneously for the first time and cross pollinations were made. As with *Dieffenbachia*, the ability to induce *Aglaonema* flowering with GA_3 application has increased breeding ease and efficiency.

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