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Research Note

Flowering Induction of *Aster ericoides* (L.) Using Gibberellic Acid

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The effect of gibberellic acid on bolting and flower characteristics of Baby Aster [*Aster ericoides* (L.)] was investigated. Five concentrations (0, 10, 30, 50 and 100 ppm) of GA_3 (Berelex ®, 10 % GA_3) were used. The diluted chemical was sprayed to the leaves of the sucker divisions 30 d after planting and repeated 1 wk later. Bolting was observed in plants sprayed with 100 ppm GA_3 10.7 d from spraying. The plants that received 50, 30 and 10 ppm GA_3 bolted 11.8, 16.5 and 25.8 d from spraying, respectively. The control bolted 53.5 d after spraying although some plants in this group remained vegetative until the end of the experimental period. One hundred percent flowering was observed in plants sprayed with GA_3 and only 55.7% flowering in the control plants. Harvesting was 48 d from bolting for the treated plants compared with 58 d for the control plants. All treated plants were much taller than the control plants (69.8 cm). The 30 ppm-treated plants were tallest at 80.6 cm while the 10, 50 and 100 ppm-sprayed plants at 75.4, 76.6, 77.5 cm, respectively, were shorter and not significantly different from one another. Flower stalk weight was not affected by the treatments.

Simple cost and benefit analysis showed that the highest net income of PhP 58,260 per cropping season was obtained from 50 ppm GA_3 spraying of aster planted in a 600-m^2 field. This income is 50% more than that from the untreated or light-supplemented plants. Since the 50 ppm GA_3-sprayed plants bolted early, gave the highest net profit and were heaviest although not significantly different from the other treatments, this dose is recommended for the commercial growing of aster. Aster is sold in the market by the weight of the inflorescence.

Key Words: *Aster ericoides* (L.), bolting, flowering induction, gibberellic acid

INTRODUCTION

Aster belongs to the *Asteraceae* or *Compositae* family, commonly called the Sunflower family. It is a perennial herb producing basal rosette leaves and a terminal paniculate inflorescence where tiny flower heads are attached (Madulid 2000). There are 500 known species of Aster, the flower heads of which come in various colors and sizes. The most popularly cultivated asters in the Philippines are *A. novibelgii*, *A. gayeri* and *A. ericoides* (Rimando 2001).

Backyard planting of Baby Aster in the Philippines was first noted in Baguio City (elevation: 1400 m asl; 16–24 °C) where *Gypsophila* (Baby's breath), its look-alike, is commercially grown. Since Baby Aster can grow in a wide range of elevation, it was brought to the lowlands where it was first commercially grown in Los Baños, Laguna (elevation: 21.7 m asl; 24–33 °C) in 1982. Aster production is now the major occupation of hundreds of families in this town which has become known as the center of aster production in the Philippines.

Aster is not considered a major cutflower in the same class as that of orchid, rose, anthurium, gladiolus and chrysanthemum in this country (Naranja 2005) but it plays an important role as filler in flower arrangement. The crop can grow in a wide range of soil types and temperatures but its flowering is very much affected by daylength. Being a long day plant, Aster requires long day exposures to induce bolting (Schwabe 1986). For this reason, growers have to manipulate the light factor in order to control its flowering and be able to synchronize it with periods of high market demand primarily during the holidays such as All Saints' Day, the Christmas season and Valentine's Day.

Approximately 4–5 wk of long day exposure (LD) of at least 18 h are promotive of flowering (Armittage 1993). Variations in long day requirements were noted in different species and cultivars. Schwabe (1986) found that *Aster novi-*