COMMERCIAL BOUGANVILLEA CULTURE*

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Bougainvillea has the potential to become a popular greenhouse pot plant. Strikingly colorful and numerous flowers make this a very attractive plant. In the greenhouse, Bougainvillea glabra requires less time to produce than many other crops, tolerates high light intensities, and has no cold requirement for forcing. The control of flowering in B. glabra is by certain specific cultural procedures. It is now possible to induce flowering on plants only 8-12 inches tall in 4-5 inch pots.

Rooting succulent tip cuttings is the most effective method of propagation but shoot apex culture is also effective. Most propagators of this plant take 3-4 inch cuttings but cuttings 6 inches long are effective with removal of the lower leaves (retain only the top 2 leaves). The larger cuttings contain more carbohydrate reserves and this may promote flowering.

Cuttings may be taken any time of the year and should be dipped in a 1000-3000 ppm rooting powder (Hormodin nos. 1 or 3).[2] A coarse-grade vermiculite or other well-drained and aerated rooting medium such as sand should be used. The cuttings root in approximately 4 weeks under mist with bottom heat of 75°F. The new roots are brittle and care must be taken in potting operations.

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When potting, multiple cuttings per pot may be used; 1 to 3 cuttings in a 4 inch and 3 to 5 in a 5 inch pot. After potting, place them under long-interval intermittent mist for several days (5 seconds every 15 minutes) to harden them off.

Bougainvillea is photoperiodic, setting buds when the night length exceeds perhaps 12 hours. Low temperatures have been suggested as enhancing bud set but 65° may be a low temperature for this plant. Excessive heat at night may delay flowering. However, some cultivars will flower during the summer in a warm greenhouse. Some cultivars appear to flower more when slight wilting is permitted between waterings. This is tricky since severe wilting may cause complete bud drop.

Severe bud drop may also occur during shipping when the plants are enclosed in boxes for a couple of days or even placed in a dark room. Silver thiosulfate sprays will help avert this (Cameron et al. 1983).

For rapid and prolific flower promotion high light is also necessary (4000-5000 f.c.). Full sunlight should be provided; more flowers are produced on more compact plants and the flower bracts gain more intense color.

The plants must be soft-pinched to promote branching when new growth starts to occur (about 10 days). Flowering seems to originate on new growth. From March 15 to October 15 use a black cloth from 7:00 PM to 8:00 AM to lengthen nights for bud initiation. The black cloth is started 1 to 2 weeks after the pinch.

Growth regulators have proven to be effective in keeping plants compact and promoting flowering, but cultivars vary in response. Growth regulators may not be needed, given the

proper culture and daylength controls. In the cultivar 'San Diego Red', cycocel treatments promote early flowers and compact growth. It should be applied as a soil drench when the axillary buds on pinched plants start to swell (5 to 7 days after pinching). A-Rest may also work with this cultivar.

Flower drop is a problem with the cultivar 'San Diego Red' and many other cultivars as well. In the greenhouse, flowers are retained for 2 to 3 weeks but when moved indoors the flowers abscise very rapidly. NAA applied to plants as a 30 ppm spray results in 50% retension after 2 to 3 weeks. It must be applied when 50-75% of the flowers have opened and are mature bracts because the spray promotes drop of immature flowers. Silver thiosulfate effectively inhibits bract abscission. Some double-flowering clones might be more suitable for greenhouse crop production because the bracts do not abscise.

During active growth, Bougainvilleas respond to high nutrient levels such as continual fertilization with 200 ppm nitrogen. For New England, the potassium level should be a bit higher than the nitrogen. If the root medium contains a bit of soil and if superphosphate has been incorporated, the fertilizer sould contain little or no phosphorus. The pH might be anywhere between 5.5 and 7.5 with 6.0-6.5 preferred.

Leaf spot (Cercospora bougainvilleae) is the most important disease of Bougainvillea. It may be controlled with Maneb or copper sprays applied several times at 10 to 14 day intervals. Insects such as scale and mealybug can be problems; these can be controlled with malathion sprays.

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