

STEPHANOTIS VINE

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Introduction

Stephanotis vine or Madagascar Jasmine is botanically named *Stephanotis floribunda* and is a member of the Asclepiadaceae family. It is native to Madagascar and can be grown as a pot plant or as a cut flower. As a cut flower, it is often used in weddings.

The growth habit of *Stephanotis* is as a woody, indeterminate vine with opposite, undivided, leathery leaves. The leaves are evergreen and elliptic. The exceedingly fragrant, white flowers, borne in cymes, are produced on short stalks from the leaf axils. There are six flowers to a cluster. The flowers are 1 to 2 inches long and the flower's five petals form a star shape. The flowers are also funnel or tube-shaped. The fruits are podlike follicles.

Propagation

Stephanotis floribunda can be propagated by seed or by cuttings. One source also suggests layering, but propagation by cuttings is the most popular method. Cuttings can be taken at any time of the year, but most frequently, half-matured, woody cuttings are taken from December to March. Cuttings from older branches or the basal part of the plant root more readily than those from younger shoots. Rooting is also enhanced by a high concentration of carbon dioxide. Cuttings will not root at temperatures below 68 degrees F, so the temperature of the media needs to be about 77 to 82 degrees F. Root the cuttings under mist or under a plastic cover to maintain high humidity. Rooting is aided by the use of rooting hormones such as IBA or IAA at 500 to 2000 ppm, and the media pH should be about 6.2. Rooting occurs at the nodes so cuttings are taken with two nodes, and after removing the lower two leaves, placed in a peat-lite media so that one node is below the media surface. Rooting occurs in 4 to 6 weeks.

Vegetative Growth

Stephanotis is photoperiodic so to avoid flowering, short days must be maintained with less than 14 hr. days. High light does aid in vegetative growth, but in the summer months in Georgia, light shading is required. Cool temperatures, such as 65 degrees F, will delay bud break following rooting, and growth slows at 68 degrees F, so the optimal temperature for vegetative growth is 75 to 80 degrees F in the summer with night temperatures of 60 to 65 degrees F. *Stephanotis* must be grown on a trellis or some other support structure. The soil should be kept evenly moist, and watering should be decreased during the winter with cooler temperatures, though the media should never be allowed to become absolutely dry. Plants should be fertilized during periods of active growth with 1 percent Superba and .6 percent potassium nitrate every two weeks. Alternatively, they can be fertilized with .5 percent Superba supplemented with .1 percent ammonium nitrate. The pH range of the media should be 5.5 to 6.5. To make training easier, growth regulators can be used. The most effective growth regulator is Bonzi applied several times in a 5% solution. According to one study, Cycocel had no effect on *Stephanotis*, and B-Nine had some phytotoxic effects as well as retarding growth.

Flowering

Flowering is initiated by long days. The plants must receive 14 hours of light to flower, or they can be lit at night for four hours. Light from incandescent lamps providing an intensity of 320 to 2200 lux will stimulate flowering. Night interruption must continue until the plant blooms. Pruning to allow light penetration and new shoot growth also greatly benefits flowering. To aid in initiating flowers, temperatures should be raised to a constant 84 degrees F for eight to ten days in addition to the lighting treatment. The temperatures can then be dropped to 73 degrees F day temperature and night temperatures ranging from 64 to 68 degrees F. Cool temperatures, those below 60 degrees F will delay flowering. Temperatures below 54 degrees F will cause flower bud abortion. High temperatures above (80 degrees F) enhances the rate of flower development but reduces the flower quality. Plants forced early produce quality flowers. It typically takes 5 weeks to force a plant into bloom.

Diseases and Insects

Stephanotis floribunda is relatively insect and disease free. The only problems cited were with infestations of mealybugs and sometimes scale insects.

Growing and Harvesting as a Cut Flower

Stephanotis is frequently grown by rose cut flower growers because of similar cultural requirements such as warm temperatures and high humidity. Some growers train it on the end wall of the greenhouse. The plants are allowed to grow for several years and are then replaced when they overrun their allotted area.

The flowers are cut as clusters and are packaged fifty per plastic bag. The bags are stored at 33 to 36 degrees F. The retailer then separates the flower clusters as they are needed.

The flowers are not typically placed in water after harvest and need to be misted frequently. They should be displayed in cool places away from sunlight, air vents, or excessively hot or cold areas. The cut flowers only last 3 to 4 days.

References

- Pugh's Florist and Gifts. 8255 Florida Blvd., Baton Rouge, LA. 70806. Internet advertisement.
- Boodley, James W. The Commercial Greenhouse Handbook. New York: Van Nostrand Reinhold Co. p. 510-512.
- Kiplinger, D. C., Alex Laurie, and Kennard S. Nelson. Commercial Flower Forcing. p. 277.
- Everett, Thomas H. The New York Botanical Garden Illustrated Encyclopedia of Horticulture. New York: Garland Publishing, Inc. p. 3231-3232.
- Larson, Roy A. Introduction to Floriculture. New York: Academic Press. p. 506.