DYEING DENDROBIUM FLOWERS

The commercial production of cut flower dendrobiums has been receiving increased attention in Hawaii. Although commercial cultivars have not yet stabilized, several selected cultivars appear to be acceptable and are being grown. These are: white--'Walter Oumae', 'Neo Hawaii Y972', 'Tomie'; pink-tinged--'Jaquelyn Thomas UH44'; two-toned lavender--'Jaquelyn Thomas 0580', 'Tomie'; purple--'Jaquelyn Thomas 66194-7'; and dark purple--'Louis Bleriot'.

Yellow dendrobium cut flowers are desired by the florist trade, but no yellow cultivar has been found suitable for commercial production. The University of Hawaii has undertaken a breeding program to produce improved yellow cultivars.

However, the life cycle of the dendrobium is relatively long and it may take a few years to develop such a cultivar.

Carnation cut flowers are available in a multitude of colors, many of which are dye colors. Conversation with a leading carnation grower of California revealed that the cultivar, 'Improved White Sim', constitutes 45% of the total production of his operation. A large proportion of these white carnations are colored with different absorption dyes. A tangerine-colored cultivar exists, yet economics favor obtaining tangerine carnations by dyeing white ones. Since carnations are easily dyed and are acceptable to the florist trade, perhaps dyed dendrobiums may also have a place.

Yellow, red, and blue flower absorption dyes, courtesy of Mr. Seiji Obata of Flora-Dec Sales, were used to test the feasibility of dyeing dendrobiums. White to pink-tinged dendrobiums used for the tests included Jaquelyn Thomas UH44, Jaquelyn Thomas K159, and Neo Hawaii X Jaquelyn Thomas UH44. The cut stems were placed in dye solutions of the label-recommended concentration (¼ tsp/½ pt) or in solutions of one half the label-recommended concentration (1/8 tsp/½pt).

The following conclusions and recommendations were drawn from the experiments:

1. Solution uptake by the spray is a key factor in dyeing the flowers. To facilitate rapid absorption of the dye solution, the basal 1½ inches of the cut flower stem should be dipped into boiling water for thirty seconds and then immediately transferred to the dye solution. Omitting this boiling water treatment results in a slow and irregular dye uptake by the dendrobium spray.

2. Flowers dyed red show beautiful reticulation, while yellow-dyed ones have a more even distribution of color. Blue-dyed flowers show veination as well as uneven coloring.

3. Yellow- and red-dyed dendrobiums last equally as long as undyed dendrobiums. Dyed sprays placed in a floral preservative in an air-conditioned laboratory averaged a half-life of approximately 20 days. Blue-dyed dendrobiums kept poorly, averaging a half life of about 8 days.

4. Dye uptake is better with a solution of the recommended concentration (¼ tsp/½ pt) than with one of half the recommended concentration.

5. Coloring is more rapid and intense with solutions of freshly dissolved dyes than with used dye solutions. However, for economic reasons the solution may be reused.

6. Excessive absorption of the dye results in blotching and bleeding at the edges. Care should be exercised to remove flowers from the dye solution before blotching occurs.

7. The rate of uptake differs among individual sprays. Staining time may vary from an hour to 24 hours.

8. The maturity of the spray, the length of the spray, and the number of flowers per spray do not affect dye uptake. No differences were observed among sprays with flowers all opened or with several buds, among sprays with flower counts from 10 to 25, and among sprays of lengths varying from 16 to 28 inches.

In the absence of commercial yellow cultivars, white or pink-tinged cultivars may be dyed yellow with an absorption dye. Also red and pink dendrobium flowers can be obtained with a red absorption dye. Within the next few years, the production of Jaquelyn Thomas UH44 is expected to rise sharply, possibly creating a surplus of pink-tinged flowers. This surplus might be rendered marketable through the use of red and yellow flower absorption dyes.

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