

## What Do Anthurium Buyers Want in Their Flowers? Results of a Market Survey

Breeding plants for cultivation has been done for centuries. The process involves selecting plants or plant populations with superior characteristics. A new variety's success has often been dependent upon its production attributes. Thus, many breeding programs have focused on the improvement of production traits, such as increased yield or increased resistance to pathogens. However, as markets for crops become more consumer-driven, breeding efforts are expanding to include important traits desired by the end-user.

Cut-flower growers have long recognized the need for variety in blossom color, size, and many other attributes to please the customer. In today's markets, expanded selection is becoming more and more desirable. Consumers are becoming more sophisticated and seeking more excitement and variety. Because flowers serve an aesthetic need rather than a physical need, the demand for certain flowers or colors can change quite dramatically. A successful floral industry is dependent upon a portfolio of flowers that will please the final consumer.

To identify traits of anthuriums desired by customers, wholesale and retail florists were surveyed regarding the anthurium characteristics they prefer or would like to see. The working assumption was that wholesalers and retailers are in a prime position to make decisions about floral characteristics because of their direct contact with the consumer. The results of this research are being used to guide the anthurium breeding program at the College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa.

### The survey

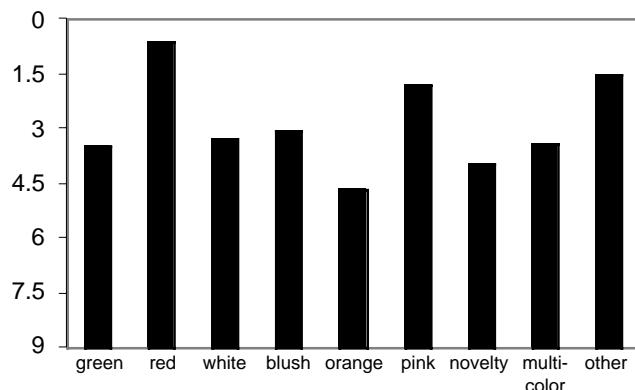
In 1996, a simple survey was sent to 350 florists to determine market preferences regarding various physical characteristics of Hawaii's anthurium flowers. (A copy of the survey instrument is on page 4.) A total of 73 usable surveys was returned; for a one-time mailing, this rate of return (20%) is considered excellent. No statistically significant differences were found between the responses of wholesalers and retailers.

### Survey results

#### *Color*

Colors were ranked on a preference scale of 1 to 9, where 1 was the highest preference. Not surprisingly, red was the most preferred color (Figure 1), with pink and "other" comprising a second tier of preference. Less preferred colors were green, white, blush, "novelty," and multi-color. The least preferred color was orange.

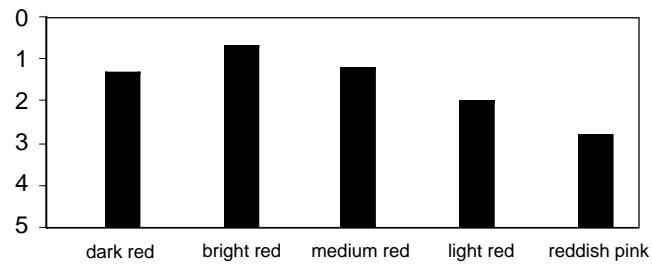
**1. Preference for anthurium color**



#### *Shades of red*

It is commonly believed that the shade of red in a flower affects its marketability. Respondents were asked to indicate the market preference for various red shades using a scale of 1 to 5. Bright red was the most preferred shade, but medium red and dark red were also highly ranked (Figure 2). Light red and reddish-pink were the least preferred shades.

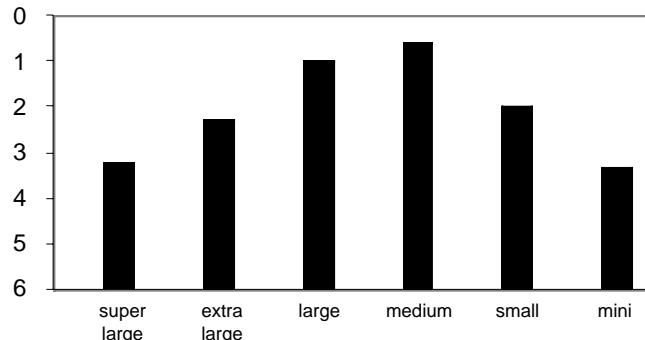
**2. Preference for shades of red**



### **Flower size**

The size of the anthurium flower can show considerable variation, depending on the variety and age of the plant. Medium sized flowers ( $4\frac{1}{2}$  inches long by 4 inches wide) were most preferred, but large flowers (6 x 5) were also ranked high (Figure 3). Interestingly, small flowers ( $3\frac{1}{2} \times 3$ ) and extra large flowers ( $6\frac{1}{2} \times 6$ ) received similar rankings, lower than medium sized and large sized flowers. The least preferred sizes were mini and super large.

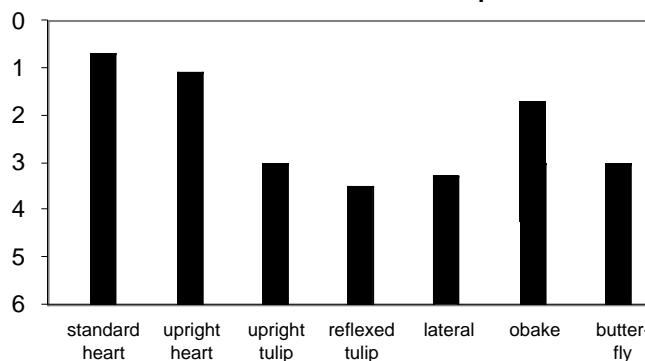
**3. Preference for flower size**



### **Flower shape**

Respondents estimated market preferences for various shapes of anthurium flowers on a scale of 1 to 6 (Figure 4). The standard and upright heart shapes were clearly preferred. The next most preferred shape was the obake. The remaining four shapes (butterfly, upright tulip, lateral, and reflexed tulip) were about equally less preferred.

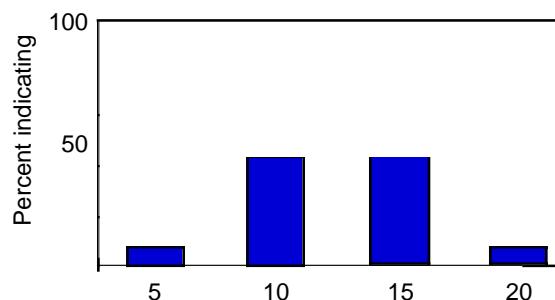
**4. Preference for flower shape**



### **Minimum acceptable shelf life (vase life)**

Ten or 15 days was the minimum acceptable anthurium shelf life, as indicated by 88 percent of the respondents, with half of these choosing 10 and the others 15. Of the remaining 12 percent of respondents, an equal number stated that 5 and 20 days were acceptable.

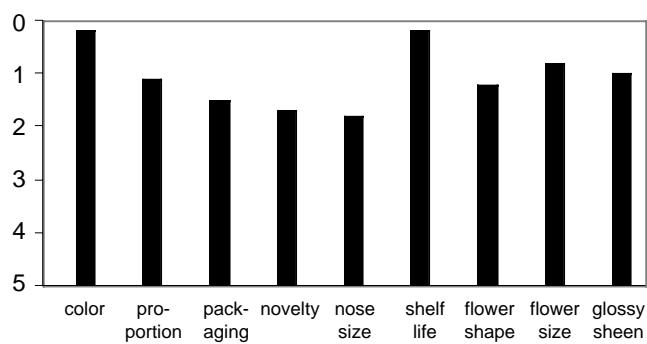
**5. Minimum acceptable shelf life (days)**



### **Factors influencing purchasing decisions**

Flower wholesalers and retailers were asked to rank on a scale of 1 to 5 the importance of factors such as price or flower color in making their purchasing decisions. Color was the most important factor (Figure 6), with shelf life and flower size next in importance. Note, however, that all of the factors listed were relatively highly ranked. This indicates the need to have a multifaceted breeding program. While color was the most important single attribute, people appear to purchase anthuriums based on a combination of attributes. Having a single-faceted breeding program could misdirect breeding efforts and result in new flowers lacking a broad-based appeal.

**6. Purchase factors**



**Fragrance**

Marketers were asked to indicate whether or not they would value fragrance in anthuriums. A majority (58%) of the respondents indicated they would value fragrance.

**Summary**

Our survey was conducted to provide further direction to UH's anthurium breeding program. The results indicate that the varietal development program is in tune with market preferences. The results also provide flower shippers and marketers with new information on flower-purchase factors. Furthermore, the results add to a greater understanding of current tastes in anthurium characteristics and suggest new directions for breeding efforts, such as including upright heart shapes (similar to Dutch varieties) or introducing scent.

Follow-up surveys or interviews may be useful to develop greater detail. For example, do the expressed market preferences vary according to the respondent's customer base? Would the time of year influence the results?

It should be recognized that market preferences are influenced by familiarity, and survey results may be biased toward the known and familiar. We suggest, therefore, that breeding efforts need not exactly match this survey's findings, and that the results should not be used to restrict efforts to develop and introduce new varieties differing from the familiar.

This survey can serve as a model for more efforts to identify consumer demands. The project was conducted at very low cost and has provided valuable information. Much of this was due to the cooperation of Hawaii's flower shippers, who were responsible for mailing out the surveys to their customers. Without their cooperation, conducting the survey would have been beyond the resources available to the authors.

*John M. Halloran<sup>1</sup> and Adelheid R. Kuehnle<sup>2</sup>*

*Departments of <sup>1</sup>Agricultural and Resource Economics and  
<sup>2</sup>Horticulture*

Acknowledgements: Assistance was received from Sunshine Farms, Tropical Connection, Green Point Nurseries, and Floral Resources. USDA-CREES project No. 96-34199-2645 provided support. Dr. Tessie Amore reviewed the manuscript.

**The survey instrument: "Tell Us About Our Anthuriums"****Dear Customer:**

In an effort to better serve you\* and your clientele, the Hawaii anthurium industry is interested in your comments on the overall acceptability of anthurium flowers. Below are a few questions on your perceptions of the market acceptability of anthuriums. Kindly take a few moments to answer this survey and return it using the self-addressed, pre-paid envelope. Thank you very much.

\*You are a: Wholesaler      Retailer      (Circle one)

**1. Rank market preference in anthurium color: (1 = highest preference, 9 = lowest preference)**

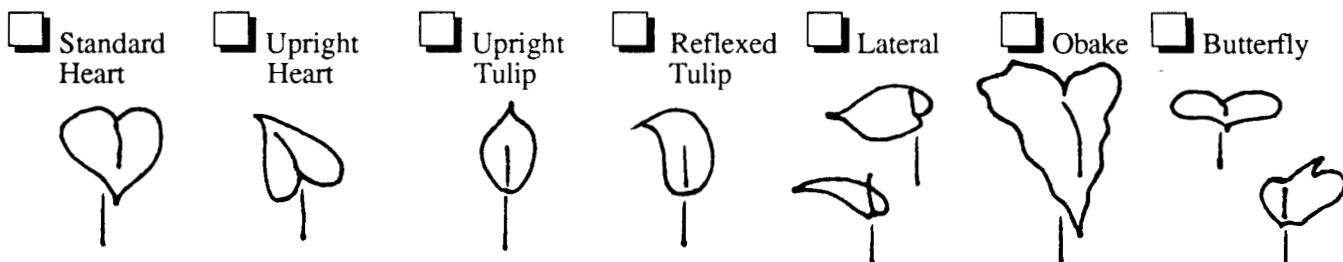
- |                                |                                  |                                     |                                      |                                 |
|--------------------------------|----------------------------------|-------------------------------------|--------------------------------------|---------------------------------|
| <input type="checkbox"/> Green | <input type="checkbox"/> Red     | <input type="checkbox"/> White      | <input type="checkbox"/> Blush       | <input type="checkbox"/> Orange |
| <input type="checkbox"/> Pink  | <input type="checkbox"/> Novelty | <input type="checkbox"/> Multicolor | <input type="checkbox"/> Other _____ |                                 |

**2. Among the red shades, please rank market preference: (1 = highest preference, 5 = lowest preference)**

- Dark red     Bright red     Medium red     Light red     Reddish pink

**3. Rank market preference in flower size for standard: (1 = highest preference, 6 = lowest preference)**

- |                                      |                                  |                                |                                 |                                |                               |
|--------------------------------------|----------------------------------|--------------------------------|---------------------------------|--------------------------------|-------------------------------|
| <input type="checkbox"/> Super Large | <input type="checkbox"/> X Large | <input type="checkbox"/> Large | <input type="checkbox"/> Medium | <input type="checkbox"/> Small | <input type="checkbox"/> Mini |
| Approx. L × W:      --               | 6.5" × 6"                        | 6" × 5"                        | 4.5" × 4"                       | 3.5" × 3"                      | --                            |

**4. Rank market preference in anthurium flower shape: (1 = highest preference, 6 = lowest preference)****5. What is the minimum acceptable shelf life (vase life) for anthurium, from time when you get it?**

- 20 days     15 days     10 days     5 days     other \_\_\_\_\_ days

**6. Please rate the importance of the following factors when making your anthurium purchase decision, with 1 = very important to 5 = not important (the same number can be used more than once):**

- |                         |  |                   |                   |
|-------------------------|--|-------------------|-------------------|
| ____ Color              | ____ Proportion of stem length to flower | ____ Packaging    | ____ Novelty      |
| ____ Nose size or angle | ____ Shelf life                          | ____ Flower shape | ____ Flower size  |
|                         |  |                   | ____ Glossy sheen |

**7. Would you value FRAGRANCE in anthurium?  Yes     No****8. Comments: \_\_\_\_\_**