

Special Research Report #402: Postproduction

Postproduction Evaluation of Non-Rooting Room Bulbs

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BACKGROUND

The use of forced bulbs as indoor flowering potted plants has increased markedly over the past 20 years. Proper postproduction handling of these plants is imperative to maximize quality and longevity for the consumer. Our research identified the proper stages of development to market and optimum transport conditions for several species and cultivars of forced bulbs. Research was also conducted to determine optimal light and temperature conditions in the consumer environment to maximize postproduction quality and longevity.

MATERIALS AND METHODS

Bulbs were planted and forced in Raleigh, NC using the procedures described in the Holland Bulbs Forcer's Guide (De Hertogh, 1996). At marketable stage (see photos), plants were sleeved, boxed, and

shipped to Gainesville, FL at 37 to 60°F (3 - 15°C), depending on species requirements. The shipping period was approximately 3 days. Plants were placed into simulated consumer conditions providing light levels of 50 or 100 ftc. and temperatures of 65, 70, and 75°F (18, 21, or 24°C).

RESULTS

The range in longevity at all the consumer conditions tested is reported and the optimal conditions are summarized.

Amaryllis (Hippeastrum) Marketable Stage



First flower stalk 12 inches tall.

Transport Conditions
Ship at 50°F (10°C).

Consumer Conditions
65°F and 50 or 100 ftc.

Expected Longevity
10 to 20 days.

Astilbe Marketable Stage



30 to 50% fully open florets.

Transport Conditions
Ship at 35 to 41°F (2-5°C).

Consumer Conditions
65°F and 100 ftc.

Expected Longevity
2.5 to 5 weeks

Convallaria Marketable Stage



1 to 3 florets fully colored.

Transport Conditions
Ship at 35°F (2°C).

Consumer Conditions
65°F and 100 ftc.

Expected Longevity
10 to 15 days

Dahlia

Marketable Stage



1 to 2 flowers open.

Transport Conditions

Ship at 55 to 60°F (13-16°C).

Consumer Conditions

65°F and 100 ftc.

Expected Longevity

2 to 4 weeks

Freesia

Marketable Stage



First floret begins to color.

Transport Conditions

Ship at 33 to 35°F (0.5-2°C).

Consumer Conditions

65°F and 50 or 100 ftc.

Expected Longevity

3 to 4.5 weeks

***Lilium* (Asiatic and Oriental Hybrids)**

Marketable Stage



First flower begins to color.

Transport Conditions

Ship at 35°F (2°C).

Consumer Conditions

65°F and 50 or 100 ftc.

Expected Longevity

2 to 3 weeks

***Narcissus* (Paperwhites)**

Marketable Stage



8 to 10 inch tall shoots.

Transport Conditions

Ship at 41°F (5°C).

Consumer Conditions

65°F and 100 ftc.

Expected Longevity

2 to 4 weeks

***Oxalis* Species**

Marketable Stage



1 to 3 open flowers.

Transport Conditions

Ship at 35 to 41°F (2-5°C).

Consumer Conditions

65°F and 100 ftc.

Expected Longevity

2 to 4 weeks

***Zantedeschia* (Calla Lily)**

Marketable Stage



2 to 3 flowers fully open.

Transport Conditions

Ship at 35 to 41°F (2-5°C).

Consumer Conditions

65 to 70°F and 100 ftc.

Expected Longevity

1 to 2 months

CONCLUSIONS

Depending on species, Non-Rooting Room bulbs should be sold either prior to flower opening or at flower opening. These bulbs need to be transported at the recommended temperatures. Temperature is the controlling factor in obtaining maximum consumer life. Longevity is maximized at consumer conditions of 65°F and 100 ftc.

IMPACT TO INDUSTRY

The development of postproduction handling guidelines will improve performance and extend longevity.

For further information:

Refer to: A.A. De Hertogh, 1996. Holland Bulbs Forcer's Guide, 5th Edition.

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