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 photo’s), plants were sleeved, boxed and shipped to Gainesville, FL at 37-41°F (3-5°C). The shipping period was approximately 3 days. Plants were placed into simulated consumer conditions providing light levels of 50 or 100 ft. 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.

Allium karataviense
Marketable Stage

Umbel expands from sheath.

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

Consumer Conditions
65°F and 100 ft.

Expected Longevity
11-16 days.

Crocuses
Marketable Stage

“Sprout” stage of development.

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

Consumer Conditions
65°F and 100 ft.

Expected Longevity
6-9 days

Daffodils (Narcissus)
Marketable Stage

“Pencil” stage of development.

Transport Conditions
Ship at 33 to 35°F (0.5-2°C).

Consumer Conditions
65°F and 100 ft.

Expected Longevity
7-18 days
**Hyacinths**  
**Marketable Stage**

“Green bud” stage.

**Transport Conditions**  
Ship at 33 to 35°F (0.5-2°C).

**Consumer Conditions**  
65°F and 100 ftc.

**Expected Longevity**  
13-20 days

**Iris Species**  
**Marketable Stage**

“Sprout” stage of development.

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

**Consumer Conditions**  
65°F and 50 or 100 ftc.

**Expected Longevity**  
4 to 6 days

**Leucojum aestivum**  
**Marketable Stage**

First floret shows color.

**Muscari (Grape Hyacinth)**  
**Marketable Stage**

First floret shows color.

**Transport Conditions**  
Ship at 33 to 35°F (0.5-2°C).

**Consumer Conditions**  
65°F and 100 ftc.

**Expected Longevity**  
9 to 17 days

**Scilla tubergeniana**  
**Marketable Stage**

First floret shows color.

**Tulips**  
**Marketable Stage**

“Green bud” stage.

**Transport Conditions**  
Ship at 33 to 35°F (0.5-2°C).

**Consumer Conditions**  
65°F and 100 ftc.

**Expected Longevity**  
9 to 17 days

**CONCLUSIONS**
Rooting Room bulbs should be sold prior to flower opening. Temperature is the controlling factor in obtaining maximum shelf life under retail and consumer conditions. These bulbs need to be transported at cool temperatures (33-35°F). Longevity is maximized at consumer conditions maintained at 65°F and 100 ftc.

**IMPACT TO INDUSTRY**
The development of postproduction handling guidelines will enable growers, retailers, and consumers to improve performance and extend longevity.

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