

Allium karataviense - A Lonely Little Onion in a
Petunia Patch

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Spring-flowering bulbs, especially tulips and hyacinths, are becoming more important in pot production in North Carolina. However, minor bulb crops such as Muscari (grape hyacinth), Crocus and Iris reticulata are often overlooked as possible Valentine's Day and Easter crops. Nowadays, many buyers of floricultural products are looking for something new -- something they've never seen before. In addition to the minor crops listed above a sweet-smelling member of the onion family, Allium karataviense, may be such an item. This species was evaluated on its performance when grown as a potted plant in a study conducted at N. C. State University during the spring of 1980.

Bulbs (9/10 cm circumference) of Allium karataviense, supplied by C. J. Zonneveld, Voorhout, The Netherlands, were shipped on September 13, 1979 and arrived in Raleigh on September 26, 1979. The temperature in transit was approximately 17°C (62°F). Three bulbs were planted in each 6½" azalea pot in a medium consisting of 3 pine bark humus: 1 sand: 1 peat moss (by volume) and amended with 4.5 kg dolomitic limestone and 1.2 kg hydrated limestone per 0.76 cubic meters. The bulbs were planted on October 15, 1979. Rooting room temperatures were 9°C (48°F) from date of planting until December 3, 5°C (41°F) until January 2 and 2°C (35°F) until the end of cold treatment. Cold treatment lengths varied from 16 to 24 weeks. Treatments are listed in Table 1. Nine bulbs were planted outside in November, 1979, as a control treatment.

The plants were forced in the greenhouses under full sun and 17°C night temperature. Plants were measured on the day that the sheath pulled back completely from around the flower head. Pots were rated as to uniformity of bloom and height, flower head size, height and percent of plants flowering.

As the length of cold treatment increased, the number of days to flowering and total plant height increased (Table 1). The quality ratings were fairly low for plants receiving either the shorter or longer cold temperature treatments. The group receiving the highest rating was that exposed to 21 weeks of cold. This group also bloomed within a reasonable length of time. Figure 1 shows 2 plants which received 19 weeks of cold treatment. The plants lack uniformity of height and some of the flower heads are hidden within the foliage. Only 4 plants grown outside flowered, perhaps because of the longer storage time prior to planting. These plants bloomed late in May.

Allium karataviense does have the possibility of becoming a commercially-forced pot plant. From this study it appears that Allium should be forced no earlier than April 1 due to the length of time required for flowering in February. The end of March should be the latest forcing date for this planting due to reduction in blooming uniformity and quality after this time. Later planting dates could be used to maintain plant quality. Further studies should be carried out using larger bulbs in attempts to improve quality of this plant as a pot crop.

Table 1. Effect of length of cold temperature treatment on flowering and quality of Allium karataviense

| No. of Cold Weeks | Days to Flower | Date of Flowering | Height at Flowering (cm) ^a | Quality Rating ^b | % of Plants Flowering |
|-------------------|----------------|-------------------|---------------------------------------|-----------------------------|-----------------------|
| 16 | 55 | March 30 | 15 | 2.2 | 100 |
| 17 | 51 | April 2 | 16 | 2.8 | 78 |
| 18 | 43 | April 1 | 18 | 3.7 | 67 |
| 19 | 40 | April 6 | 20 | 2.2 | 100 |
| 20 | 37 | April 11 | 19 | 2.8 | 100 |
| 21 | 33 | April 12 | 22 | 1.7 | 100 |
| 22 | 34 | April 20 | 20 | 2.7 | 100 |
| 23 | 30 | April 23 | 20 | 2.2 | 100 |
| 24 | 30 | April 30 | 23 | 3.7 | 100 |

^aPlants measured from nose of bulb to top of flower on the date that the sheath pulled back completely from around the flower head.

^b
 1 = Excellent
 2 = Good
 3 = Fair
 4 = Poor



Figure 1. Allium karataviense forced in March, after 19 weeks of exposure to low temperatures.