

‘Lady Bird Johnson Royal Blue’ Bluebonnet (*Lupinus texensis* Hook.)

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The six *Lupinus* L. species native to Texas were designated as the Texas state flower by the state legislature in 1971 (Texas State Library and Archives Commission, 2010). The most widespread, bluebonnet (*Lupinus texensis* Hook.), is a winter annual that produces predominantly violet–blue [violet–blue group 96A; Royal Horticultural Society (RHS), 1982] flower spikes in early to middle spring. This species is used widely in impressive floral displays along roadsides throughout much of the state (Andrews, 1986). In 1985, a breeding project was initiated to develop bluebonnet cultivars to use as bedding plants. A primary objective of the project was to develop novel bluebonnet flower colors. Color variants exist in native populations but are quite rare. ‘Abbott Pink’ was the first cultivar to be developed (Parsons and Davis, 1993) followed by ‘Barbara Bush’ lavender (Parsons et al., 1994) and ‘Texas Maroon’ (Mackay et al., 2000). ‘Lady Bird Johnson Royal Blue’ was developed by recurrently selecting for flower color and is the fourth seed-propagated cultivar to be released from this project. This cultivar is intended for use as a bedding plant and is named after the late Lady Bird Johnson who enthusiastically encouraged highway beautification with bluebonnets being a key component.

Origin

This striking cobalt blue color was derived from an isolated planting of another possible new color of red (red group 46A; RHS, 1982) bluebonnets in 2006. The red-colored isolates were saved from a ‘Texas Maroon’ bluebonnet field. Several cobalt blue plants were identified with the seed being harvested and saved. This seed produced a population composed of ≈75% cobalt blue

plants in Spring 2007. Cobalt blue flowers were selected for 2 more years until a pure (greater than 99%) cobalt blue-flowered population was obtained. This line has been isolated and maintained and is now being released as ‘Lady Bird Johnson Royal Blue’. Seed collected from ‘Lady Bird Johnson Royal Blue’ will not remain pure unless plantings are isolated from other sexually compatible taxa of *Lupinus*. Plantings are grown routinely in fields separated by a distance of more than 2 miles from other bluebonnet selections.

Description

Plants form dense rosettes in fall and then bloom the next March or April, depending on the location and weather. The bloom period of individual plants is 3 to 5 weeks with individual flowers being attractive for 1 week or more depending on weather conditions and plant culture. Plants are 30 to 50 cm tall and have a mounded form 50 to 70 cm in diameter at full bloom. Leaves are alternate, palmately compound with five leaflets. Leaflets are yellow–green (RHS 146B), oblanceolate, 3 to 5 cm long, and 12 to 16 cm wide at their widest point. The plant produces 120 to 200 racemes/m² of ground surface. Racemes are dark blue, i.e., violet blue, almost purple (violet–red group 93A), 9 to 12 cm long, 2 to

4 cm in diameter and contain 20 to 35 flowers. Flowers are papilionaceous, fragrant, 1 to 2 cm long, borne on a 6- to 12-mm long pedicel. Fruits are pubescent legumes 30 to 50 mm long and 6 to 10 mm wide with four to seven seeds each. Seeds are light to medium brown in color occasionally speckled with black and weighing ≈3.5 g/100 seeds.

The average yield for a planted acre of bluebonnets harvested with a combine is 100 to 120 pounds per acre. Over half of the seed is lost during harvesting as a result of shattering of the pods. However, the ‘Lady Bird Johnson Royal Blue’ selection produced over four times (580 pounds per acre) as much seed per acre as any bluebonnet color ever harvested during the 2010 harvest (John Thomas, personal communication).

Cultivation

Seeds must be acid-scarified to obtain optimal germination (Davis et al., 1991). Germination of untreated, 1-year-old seed is 65% within 30 d. If seeds are soaked in concentrated sulfuric acid for 1 h, the germination will be 90% within 10 d. Irrigation or rainfall is needed to trigger germination, but once plants are established, they require little additional irrigation under central Texas climatic conditions. The plants grow well in most soil-less media (Peterson Brothers Nursery, personal communication). The plants overwinter in U.S. Dept. of Agriculture hardiness zones 8 to 11 (U.S. Department of Agriculture, 1990) and often survive winter in zone 7. Chilling is not required for flowering.

Performance

Except for having a unique flower color (Fig. 1A–B), the garden performance of ‘Lady Bird Johnson Royal Blue’ is indistinguishable from the species type in appearance, growth rate, and flowering habit. ‘Lady Bird Johnson Royal Blue’ has been grown successfully from seed outdoors in the following Texas locations: San Antonio, Fredericksburg, Eagle Lake, College Station, and Castroville, TX.



Fig. 1. Photographs of ‘Lady Bird Johnson Royal Blue’ bluebonnet (in back of A and right of B) compared with native Texas bluebonnet (in foreground of A and on left in B).

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Availability

Seed will be available from Wildseed Farms, Stonewall, TX, for the 2013 planting season.

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