

BLACK-EYED SUSAN - A USEFUL WILDFLOWER

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INTRODUCTION

Black-eyed Susan, *Rudbeckia hirta* L., is a native wildflower which occurs over much of the eastern half of the United States (Gleason, 1952). This species may be either annual, biennial, or perennial in habit. It has upright stems 1.5-3.5 feet tall which are covered with stiff hairs, and usually has a few branches (Radford et al., 1968). The flower heads resemble a single, bright yellow flower 2.0-3.5 inches in diameter with a dark conical center, and occasionally a maroon to red band encircling the center. Flowering occurs mostly from May-August in Mississippi (Timme, 1989), and begins near mid-summer at the latitude of Lincoln, Nebraska (Weaver 1954).

USES

Black-eyed Susans are planted along highways and other roads to provide diversity, color, and beauty to the roadsides. Stands will often develop along roadsides naturally. This species can compete well with other vegetation if the mowing schedules and other management practices are reasonably well suited to its requirements. Phillips (1985) recommends it for borders in home gardens and in mixtures with other wildflowers. Reilly (1978) states that it is also used for cut flowers.

SUITABLE SITES

Black-eyed Susans are best suited to sites receiving full sunshine, and to well drained soil of poor to average fertility. Shading produces leggy plants with a less compact growth form. Too much fertilizer or organic matter produces tall, lush plants that are prone to blow over (Phillips, 1985). The species seems to be tolerant of soil from sandy to mostly clay, and from quite acid to mildly alkaline. Soils which are waterlogged for extended periods are not suitable for Black-eyed Susans.

SEED COLLECTION AND AVAILABILITY

Seeds are available both from some wildflower seed dealers and from some lawn and garden centers. Some selected strains have double flowers, large flowers, and more flower color than

'wild,' unselected strains. Such types may be more desirable in home gardens, but 'wild' types may be better suited for roadside plantings or other areas that will receive less care than gardens.

Seeds can be collected from plants after the cones turn gray. Shake dry cones over a pail or bag to dislodge seeds. The seeds are small, 1/8 inch long, grayish, and square or 4-angled in cross section (Phillips, 1985). Mechanical harvesters such as properly adjusted combines may be used to harvest large stands.

ESTABLISHMENT AND MAINTENANCE

Transplanting seedlings is one method of establishing Black-eyed Susans. Bedding plants are available from some garden centers, or transplants may be produced by sowing seed into a good growth medium in trays during late winter or early spring. Cover seed only very lightly. Germination occurs within two weeks indoors or outdoors in warm temperatures. Allow the growth medium to dry between waterings. Transplant into containers when 3-4 leaves develop (Phillips, 1985). Reilly (1978) states that seed may be planted outdoors in spring or summer, and that plants from early seedings will bloom the first summer. Experience has shown that Black-eyed Susans seeded in a greenhouse in late winter and then transplanted into the field in May will bloom by late summer. The onset of flowering is delayed beyond that of plants which over-wintered in the field, but these younger plants will continue blooming until frost.

Direct seeding of Black-eyed Susans into fields and gardens is another means of establishment. There are approximately 1,700,000 seeds per pound, and a seeding rate of 1-2 pounds per acre is usually adequate. Planting rates of one pound per acre, or one ounce per 2800 square feet, or one gram per 100 square feet each provide approximately 35-40 seed per square foot.

August seedings were made at the Jamie L. Whitten Plant Materials Center, sowing approximately one pound of seed per acre onto the soil surface. The success of these plantings varied with different seedbed preparations.

1. A good-excellent stand developed on a field which had been mowed, and then seeded with a no-till drill. Some soil scarification occurred, but most seeds were planted on the surface. Most seeds did not germinate until the following April.
2. A good stand followed a broadcast planting made after vegetation had been sprayed with a contact herbicide, and the residue then burned off.
3. An adequate stand was achieved by closely mowing the vegetation on a field prior to it being broadcast seeded.
4. Seeding in rows onto loose, clean-tilled soil has yielded poor stands.

The best germination seems to occur on firm soil without much vegetative growth, mowed residue, or mulch. Phillips (1985) states that Black-eyed Susan will usually regenerate itself from seed in a garden, with a surplus of seedlings. Roadside plantings can be made by scattering seed onto the soil surface of closely-mowed areas in mid-late summer. A very light soil scarification with a disk or harrow is beneficial. Ideally, this should just lightly scratch some of the soil surface without destroying much vegetation. Germination of seed often will occur by late summer to early fall.

The timing of mowing is important in managing Black-eyed Susans. If spring mowing is practiced, it should be done early as stems which produce the flowers begin to grow up rapidly by early-mid April. Mowing in late July-early August after seeds mature spreads the seeds and reduces competition from other plants. An end of the growing season mowing reduces competition for overwintering plants and gives a neat appearance. Some flexibility in mowing schedules is tolerated by the plants. However, too much or improperly timed mowing can reduce flower production or stand density, and too little mowing may allow competing vegetation to crowd out the Black-eyed Susans.

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