

PURPLE CONEFLOWER
Echinacea purpurea (L.) Moench

Description: An upright perennial (to 3 feet tall) with hairy, ovate to lance-shaped leaves. The outer ray flowers of the flower head are pale purple to lavender or sometimes pink and tend to droop downwards. The central disk flowers are reddish brown in color, found among stiff spines that arise from the receptacle. Individual flowers are fairly long-lived, with the flowering season occurring from June to August. Perenniating plants overwinter as a low-growing rosette of leaves.

Uses: This plant is used mainly for landscape beautification. It has potential for use in cultivated, garden situations, in naturalized prairie or meadow plantings, and due to its drought tolerance, is especially well suited for dry roadsides. This species also has medicinal properties.

Site adaptation: Purple coneflower is fairly uncommon in the state and will be found as a few scattered individuals growing mainly in areas with Blackland Prairie soils. It will grow on other soil types, but requires a well-drained soil with a pH of 6-7. Plants grow best in full sun, but they will tolerate light shade.

Cultural Specifications

Method of establishment: Seeds, transplanted seedlings, or division of mature clumps.

Planting time: Seeds can be sown in late summer (August-September) or in the spring. Spring-sown seeds will germinate more uniformly if given a four week cold, moist treatment (stratification) before planting. Transplants are generally planted in the spring, after all danger of frost is past. Clumps are dug, divided and replanted during the dormant season.

Seedbed preparation: Purple coneflower should be seeded on a clean-tilled site and if possible planting on raised beds or rows will improve aeration in the soil around the root system. A thick layer of plant residue on the soil surface will interfere with seed germination. A firm seedbed can be formed by cultipacking the soil before planting.

Planting rate and method: Seeds can be broadcast, however, for best stands drilling 1/4 inch deep in the soil is recommended. The recommended planting rate is 10-12.5 grams per 100 square feet (10-12 lb/acre). Seeds that are broadcast on the soil surface will require harrowing or cultipacking after planting to firm them into the soil. Seeds sown in late summer will generally not germinate until the following spring. Transplants should be planted 1-2 feet apart.

Greenhouse production: Seeds can be sown after harvest in outdoor beds or they can be stored and planted in the greenhouse in the spring after four weeks of stratification. The potting medium should be sterile and well drained. Cover the seeds with 1/8 to 1/4 inch of potting soil. After germination allow the surface of the soil to dry between waterings to prevent seedling losses due to rot and disease. Transplant the seedlings into larger containers when they have two sets of true leaves. A weekly application of a soluble complete fertilizer is recommended.

Seedlings should be hardened-off by placing them outdoors in a shady location for approximately one week before they are planted in the garden or landscape.

Fertilizer requirement: Apply according to soil test recommendations. If not available, a rate of 3.5-5.5 oz per 100 square feet (100-150 lb/acre) of 13-13-13 should be applied after the seedlings are established and annually thereafter. Liming will be necessary if the soil pH falls below 6.

Companion plants: Purple coneflower is usually found growing in mixed stands with many different types of plants. Some suggested companion plants are: black-eyed susan, lance-leaf coreopsis, butterfly milkweed, gaillardia (Indian blanket), goldenrod, and ox-eye daisy. Grasses will be a major component of most naturalized and roadbank plantings.

Management

Mowing: If necessary, plants can be mowed in the spring before stem elongation begins in April. Later mowings should be delayed until the plants have set seed in September.

Seed production: Seeds mature about 5-6 weeks after flowering. They will turn brown to black in color when mature. Do not try to collect seeds until the spines on the receptacle loosen their hold on the seeds. At this time the heads shatter fairly easily when handled. Seeds can be collected by hand or larger plantings can be harvested with a combine. Cut the heads off of the plant and loosen seeds by shaking or breaking the heads apart. Goldfinches relish eating purple coneflower seeds and can quickly consume all available seeds.

Additional information: Phillips, H. R. 1985. Growing and propagating wild flowers. Univ. of North Carolina Press, Chapel Hill.

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