

CARDINAL FLOWER  
*Lobelia cardinalis* L.

**Description:** Cardinal flower is a perennial herb with a strongly upright habit, reaching 4-5 feet in height. Leaves are alternate, lower leaves have petioles, which become reduced upwards on the stem; leaf blades narrowly oval or lance-shaped, up to almost 8 inches in length. The scarlet (rarely white), two-lipped flowers are produced from July to October on long stalks at the top of the plant. Capsules are rounded, containing numerous, tiny amber to brown colored seeds.

**Uses:** This plant is used mainly for landscape beautification. It has potential for use in water gardens, along ditches, and in other wetland sites. It can also be planted in gardens on non-wetland soils, if additional water is supplied during the establishment year and during times of drought. Cardinal flower also has medicinal uses and can be used to attract hummingbirds to the garden.

**Site adaptation:** Cardinal flower is adapted to areas with fine to medium textured mineral soils and organic soils. In Mississippi, it can be found in all areas of the state, except the Delta and along the Coast. Plants grow best in partial shade, but can tolerate full sun if given additional water during times of drought.

### Cultural Specifications

**Method of establishment:** Seeds or transplanted seedlings.

**Planting time:** Seeds can be planted from August to October or in the early spring. The cool, moist conditions during winter promote germination of this species, but are not required for germination to occur. Transplants are generally planted in the spring, after all danger of frost is past.

**Seedbed preparation:** Cardinal flower is difficult to establish in the field due to the extremely small seed size. Plantings should only be attempted on extremely level sites not subject to soil erosion after all plant material and residue has been removed by tillage. A clean, firm seedbed is essential. The soil can be firmed with a roller or cultipacker or allowed to settle naturally before planting.

**Planting rate and method:** Broadcast seeds at a rate of 0.5 grams per 100 square feet (8 oz per acre). The seeds can be mixed with sand or rice hulls to increase volume so that it will be easier to spread them uniformly over the planting site. Seeds must remain on the soil surface because they require light for germination. Heavy rains after planting may cause seeds to be buried too deeply or washed from the site. Transplants can be spaced 1-2 feet apart.

**Greenhouse production:** Seeds will germinate without a cool, moist treatment (stratification), but germination will be faster and more uniform if seeds are stratified by mixing them with moistened potting soil and refrigerating for two months prior to planting. Seeds should be sown in flats in a well-drained, sterile growing medium in late winter to early spring. The seeds need to remain close to the surface of the medium. Overhead irrigation can bury the seeds, but watering the seed flats from the bottom by placing them in a pan of water will prevent this. Seeds should germinate in high percentages within 2-3 weeks. Transplant the seedlings into larger containers when the roots are about an inch long. The

seedlings are very delicate and can be transplanted in small clumps in order to disturb the roots as little as possible. Weekly applications of a soluble complete fertilizer are recommended. Seedlings are ready to plant outdoors about 12-16 weeks after sowing. Prior to planting, seedlings should be hardened-off by placing them outdoors in a shady location for approximately one week.

**Fertilizer requirement:** Apply according to soil test recommendations. If not available, a rate of 2.8-3.5 oz per 100 square feet (75-100 lb/acre) of ammonium nitrate on wetland soils and 3.5-5.5 oz per 100 square feet (100-150 lb/acre) of 13-13-13 on normal soils should be applied after the seedlings are established and annually thereafter.

**Companion plants:** Some species that may be suitable for planting with cardinal flower in wet sites are bur marigold, Ludwigias, cattails, and mistflower. In the garden, good companion plants are plains coreopsis, black-eyed susan, and goldenrods.

### Management

**Mowing:** Cardinal flower does not respond well to mowing, however, plants do require some hand cultivation to keep them healthy. The stems die back after flowering, but new offshoots are produced at the base of the stem. These offshoots must not become covered with leaves or other plant residue or the entire plant will die.

**Seed production:** Seeds are usually collected in October, however, the capsules ripen indeterminately and must be checked at several points along the stem. The capsules will open slightly at the tip when seeds are mature. The stalks are cut below the capsules, allowed to dry, and seeds are then shaken loose or the capsules crushed to release the seeds.

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

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