

NATIONAL PLANT MATERIALS CENTER BELTSVILLE, MARYLAND

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TECHNICAL NOTE

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WILDFLOWERS FOR THE MID-ATLANTIC: WILD BERGAMOT (*Monarda fistulosa*)

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INTRODUCTION

Wild bergamot, *Monarda fistulosa*, is a perennial wildflower whose native range on the East Coast extends from Canada south to Georgia (Gleason and Cronquist, 1963). The plant is commonly found in dry fields, thickets, and along woodland borders. It has an upright form and can grow to a height of 2 to 3 feet. The leaves of wild bergamot are lance-shaped and range in color from grey-green (lower leaves) to pinkish (upper leaves and bracts). Showy 2-inch clusters of pale pink to lilac-hued flowers appear in July and August; once pollinated, these flowers give rise to smooth oval nutlets in the fall (Brown and Brown, 1984).

USES

Wild bergamot is an ideal plant for meadow or roadside plantings; as with many delicate wildflowers, mass plantings give the best color effect. The National Plant Materials Center (NPMC) produces wild bergamot seed for a wildflower / native grass mix used at planting sites along Skyline Drive in Shenandoah National Park. Wild bergamot is suitable for home perennial gardens; it may be grown for cut flowers or the herbal properties of its leaves, or used for naturalizing an area (Art, 1986; Jones and Foote, 1990; Phillips, 1985). The nectar-producing plant attracts hummingbirds and several species of butterflies (Sedenko, 1991; Wilson, 1992).

SUITABLE SITES

Wild bergamot grows naturally in full sun on well-drained sites with sandy soil, but can tolerate light shade and soil that remains damp for much of the growing season (Jones and Foote, 1990). If grown in too humid a climate, wild bergamot is likely to be affected by mildew (Art, 1986).

SEED COLLECTION AND AVAILABILITY

Seeds of wild bergamot are readily available from mail-order native plant nurseries. Seeds can also be collected from wild populations, where permissible. Seeds ripen in the fall, anywhere from 1 to 3 weeks after flowering (Phillips, 1985). The NPMC has collected mature seeds in the mountains of western Virginia in late August through September. Seeds are shaken from the heads into a bag. Any chaff is removed by fanning, sieving, or using a seed clipper.

In the half-acre production field at the NPMC, seed heads are harvested in mid-August using a plot combine. Harvested heads are then spread out to dry. Seeds and chaff are separated in a floor model 2-screen clipper. The seeds are stored dry in cloth bags at 35 °F.

ESTABLISHMENT AND MAINTENANCE

The NPMC has used seedling transplants as a means of establishing wild bergamot in production fields. Germination may occur more rapidly if seeds are given a chilling treatment prior to sowing (Art, 1986), but recent testing at the NPMC indicated there was no significant increase in total germination percentage after 2, 4, 6, or 8 weeks of cold stratification. Seeds are sown on commercial germination mix in 392-cell seed flats (TLC Polyform Inc., Minneapolis, MN). Seed harvested from a 2 year old production field germinated in 5 to 6 days in the greenhouse.

After 4 weeks of growth in seed flats, wild bergamot seedlings are moved into 72-cell plug trays (TLC Polyform Inc., Minneapolis, MN) in preparation for machine-transplanting into production fields. The NPMC uses a commercial peat : perlite mix and a time-release fertilizer in all seedling trays. A soluble fertilizer (20-18-18) is applied twice a week to young plants in the greenhouse. Cutting back seedling tops may produce sturdier plants but is not always necessary. Seedlings grown in plug flats are ready for the field in approximately 9 weeks. The NPMC has planted plugs directly in the ground in both spring and fall with good establishment but plants generally do not flower until the second growing season.

According to Art (1986), wild bergamot seeds may be sown directly into a prepared seedbed in the fall and will germinate the following spring. Seeds should be sown 1/16 inch deep at a rate of 3 pounds per acre (Wildseed Farms, 1997).

Maintaining production fields of wild bergamot at the NPMC entails monthly hoeing around plants to reduce weeds and / or planting a cover crop like hard fescue or red fescue between rows when plugs are transplanted. A pre-emergent herbicide such as trifluralin (tradename: Treflan, produced by DowElanco, Indianapolis, IN) may also be used to prevent weeds around wild bergamot plants.

SEED PRODUCTION

A 0.45 acre production field of wild bergamot was established at the NPMC in 1993. In 1994, 1.51 pounds of seed were harvested from the field, and in 1995, the amount of harvested seed increased to 8.5 pounds. In 1996, only 4.7 pounds of seed were harvested, possibly due to overcrowding of plants; half of the field has been replaced with young plants and it is anticipated that seed production will increase in 1997. There are 5 million wild bergamot seeds per harvested pound.

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