'Petite Delight' Monarda

Lynn M. Collicutt and Campbell G. Davidson¹

Morden Research Centre, Agriculture and Agri-Food Canada, Unit 100-101
Route 100, Morden, MB, R6M 1Y5, Canada

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The majority of commercial "monarda" or "bee-balm" cultivars have been derived from *Monarda didyma* L. (Labiatae Juss.), an eastern North American species. More recently 'Marshalls Delight' was developed by hybridizing two species, *M. didyma* and *M. fistulosa* L. ssp. *fistulosa* var. *menthifolia* (Graham) Fern. (*menthaefolia*, orthographic error by authors) (Collicutt, 1989). This latter species, a North American prairie native species, introduced adaptability to dry sites, higher soil pH along with increased winter hardiness into the gene pool.

'Petite Delight' is the first dwarf hybrid cultivar of monarda, a summer flowering, herbaceous perennial. This clone is a breakthrough in breeding, as it combines unique dwarf stature, good winter hardiness, a high resistance to powdery mildew (*Spaerotheca pannosa* Wallr. ex Fr.), and an adaptability to the hot, dry summers of the prairies.

Origin

'Petite Delight' monarda was developed from a series of open-pollinated and controlled crosses (Fig. 1) and was first selected in 1988. 'Souris' was selected as a parent based on proven fertility. *Monarda fistulosa* ssp. *fistulosa* var. *menthifolia* served as the male parent to improve prairie adaptation. In a series of open-pollinated and controlled crosses made between the early 1960s and the present, seedlings in each generation were screened for disease resistance, flower color, hardiness, and plant form. Plants were tested for disease resistance and hardiness under field conditions at several locations in Manitoba and more recently in field trials at the Chicago Botanic Garden. In 1988, a chance dwarf seedling was identified and propagated for further trials. Currently it is being propagated and released as 'Petite Delight'. The name was selected to reflect the dwarf stature of the plant and to recognize the parent 'Marshalls Delight'. All color designations were determined by using the standardized color charts (Royal Horticultural Society, 1986).

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¹E-mail: cdavidson@em.agr.ca

Description

'Petite Delight' monarda is a dwarf, vigorous plant averaging 25 to 30 cm in height and width. Plants are round to oval in shape. Foliage is dense, shiny dark green (147A) and borne on four sided stems. Leaves are 40 to 70 mm long (mean 60 mm) and 20 to 40 mm wide (mean 35 mm). Leaf size is similar to that of 'Marshalls Delight'. Foliage is much darker green than that of 'Souris' and more similar to 'Marshalls Delight'.

Flowers form a dense compound inflorescence (verticillaster), which is borne terminally and averages 60–65 mm in diameter. Flower color varies from light pink-purple to light purple (64A, 72B, 80A). Flowers fade to a lighter color as they age. The numbers of inflorescences vary with the vigor of the plant. Flowers, stems, and foliage are aromatic, typical of both *M. didyma* and *M. fistulosa* (Mazza et al., 1988).

Performance

Flower duration averages 6 to 8 weeks beginning in late July and extending to August in Morden, Manitoba. Flower color changes often over the course of the flowering period. Colors appear more intense under cooler temperatures than under hot, dry conditions, and become lighter with age. From a distance, 'Petite Delight' appears similar to bedding

chrysanthemums because of the mound-forming nature of the plants. Plants should be "dead-headed" after flowering to promote regrowth of the foliage and improve the appearance of the plant.

Plants are hardy to at least Agriculture Canada zone 3 with no winter protection other than naturally occurring snowfall (Ouellet and Sherk, 1967; Sherk and Buckley, 1968). Because of the low-growing habit of the plants, snow cover could extend this range to colder regions. Fall stem removal will reduce snow cover and potentially increase winter injury potential; for this reason, removal of old stems is recommended in spring. Care should be exercised not to damage the crown of the plant.

Powdery mildew has not been observed as a major problem on 'Petite Delight' during the course of the evaluations. Rust (*Puccinia menthae* Pers.) has been observed on this cultivar, but infections generally occurred late in the season and were not severe. In comparative trials, the disease resistance of 'Petite Delight' was rated "very good" relative to that of other cultivars in the trade (data not presented).

Propagation and uses

'Petite Delight' can be propagated by rhizome and softwood stem cuttings, division and tissue culture. Rhizome cuttings are very successful and appear to be a very rapid means of increase. About 30 rhizome cuttings per plant have been obtained from 2- to 3-year-old plants. Rhizome pieces, 2.5 to 5 cm in length, should be harvested in early spring or fall with 0.5 to 1 cm of terminal growth, inserted into potting media, then grown in the greenhouse or outdoors under protection. This technique will not be successful if the cuttings have too much leaf growth. Softwood stem cuttings should be taken very early in the growing season and rooted under intermittent mist, as

Fig. 1. 'Petite Delight' monarda.

M. didyma* 'Souris' x *M. fistulosa* var. *menthifolia

Fig. 2. Parentage of 'Petite Delight' monarda.

response declines dramatically in midsummer (unpublished data). Hormone treatment is not essential, but will increase rooting speed. Crown divisions are successful for small increases. Two-year-old plants can often yield

six to eight propagules. Tissue culture protocols are being developed.

'Petite Delight' is ideally suited for large mass plantings. Floral designs could be easily sculpted using this plant in combination with

other low growing herbaceous plants. The shiny, dark green foliage contrasts well with the light purple flowers. Plants can also be used as specimen plants or for edging, dividing sections of beds, or defining boundaries. 'Petite Delight' can be used in traditional formal beds, providing mid- to late-season bloom.

Availability

'Petite Delight' monarda is registered with the Canadian Ornamental Plant Foundation (COPF), P.O. Box 21083, North Bay, ON, P1B 7N8, Canada. The following have exclusive propagation and distribution rights to this cultivar: COPF in Canada; Bailey Nurseries Inc., 1325 Bailey Road, St. Paul, MN, 55119 in the United States (plant patent applied for); FarPlants Sales Ltd., Littlehampton, West Sussex, U.K., in Europe, and Colourwise Nursery (NSW) PTY Ltd., P.O. Box 162, Glenorie NSW, 2167, in Australia. Research material is available on a limited basis after signing a nonpropagation agreement. Propagation material is available by contacting C.G.D.

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