

Culture Sheet: *Technical Information for Growers*

Name: *Monarda bradburiana*, *M. didyma*, *M. fistulosa*, hybrids

Common name: beebalm

Scheduling Information

Available sizes: 72, LP50 **Sales Window:** all year

Plug size	72
Finish size	1 gal
Weeks to finish	8-10 wks
When to pot	Spring, summer

Growing on to Finish

Media:	Professional potting media with adequate drainage
pH:	5.8-6.4
EC:	1.5-2.5 pour-thru method
Irrigation:	Consistent, moist soil. Do not allow soil to dry out. Increases susceptibility to disease.
Fertilizer:	Moderate feeders. 150-200 ppm nitrogen as needed or 50-100 ppm nitrogen every irrigation
Light:	High light levels. Requires long days for flowering
Temperature:	Rooting out: 62-68F Growing: 65-72F Holding: 50F outdoors
Pest & Disease:	Aphids, spider mites, thrips and whiteflies. Cercospora leaf spot, powdery mildew, Rhizoctonia crown rot, and rust.
Pinching:	Pinch 2 weeks after planting to encourage branching
Vernalization:	9 weeks cold for strong and consistent flowering

Grower Tips:

- Highly susceptible to foliage diseases. Provide good air circulation, adequate pot spacing, and irrigate by hand, if possible, to limit overhead watering and wetting the foliage
- Most *Monarda* species and hybrids come from moist environments and need consistent soil moisture besides *M. punctata* which comes from drier conditions.

Disclaimer: Cultural information is provided as a guide only. North Creek Nurseries does not guarantee the exact results, as growth and finish times may vary depending upon your location, climate, cultural practices and other influences. Always check manufacturers' labels for approved rates and usage instructions when applying fertilizer or other chemicals.

Sources: Nau's Ball Perennial. Walters Gardens



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Notes and Helpful Terms *Technical Information for Growers*

Notes on Pest and Disease: Pests and diseases listed are problems that commonly occur with this crop but not a guarantee that this issue will arise. By knowing it's common complaints, growers can develop strategies for monitoring and treating the crop.

Recommended ranges for EC, pH, and light intensity:

Light intensity is measured by foot candles, lumens, or lux. The light intensity varies by latitude, season, and weather from day to day. A general range we try to stay within for optimum growing conditions for our full-sun crops are 2,000-3,000 foot-candles ($600 \text{ umol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$).

We generally keep our pH range 5.8-6.2 on most crops. A pH of 6.5+ or above can lead to an iron deficiency in some crops, especially warm season grasses.

We measure the soluble salts in the soil using the EC pour-through method. Generally speaking, having a reading that ranges between 1.5-2.0 is optimum for most crops.

We are frequently asked about how to design and implement a production program. As each facility and production program is different, we urge growers to review the resources we have posted here or to consult with a grower consultant. We are happy to share information about our experiences regarding fertility programs, monitoring EC, light, watering regimes, soil media, and greenhouse production.

Here are some resources we find helpful:

Beytes, Chris. (2011) *Ball Redbook Volume 1 Greenhouses and Equipment* (18th ed.) Batavia, IL: Ball Publishing.

Nau, Jim. (2011) *Ball Redbook Volume 2 Crop Production* (18th ed.). Batavia, IL: Ball Publishing.

Nau, Jim. (1996) *Ball Perennial Manual Propagation and Production*. Batavia, IL: Ball Publishing.

Pilon, Paul. (2006) *Perennial Solutions A Growers Guide to Perennial Production*. Batavia, IL: Ball Publishing.

We also encourage growers to join and participate in the International Plant Propagators Society, of which the North Creek grow team are members. There is an IPPS group for each region of the United States – production information, trials, experiments, and experience are freely shared within IPPS and it is a valuable resource for growers, propagators, and other plant experts.



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