

Dahlia

Miss Mandy

Culture Guide

Dahlia x hybrida

Product form: Vegetative

Containers: Gallons

Habit: Mounded

Garden Specifications

Garden Height: 18–24" (45–60 cm) tall

Garden Width: 14–18" (35–45 cm) wide

Exposure: Part Sun

USDA zone: 10–11

AHS zone: 10–3

Product use: Containers, Landscapes, Patio Pots, Combos

Propagation of Unrooted Cuttings

Root emergence: 8–10 days

Rooting hormone: Beneficial. A 0.1% (1,000 ppm) IBA concentration using either powder or liquid formulations can be applied to the lower portion of the cutting stem. Be careful not to coat the leaves or entire cutting—excess application can cause burning and damage to the cutting. Another option is to apply an overhead heavy spray to the cuttings (penetrating the rooting media) using water-soluble K-IBA (Hortus or Advocate) at 250–300 ppm 24–48 hours after sticking. Do not use overhead applications of alcohol-based IBA solutions (ex. Dip 'n Grow®).

Bottom heat temp: 70–74 °F (21–23 °C) for the first three weeks. After roots are well developed, temperatures can be lowered to hold and tone the cuttings.

Misting: Mist schedules vary depending on light and temperature conditions. Apply just enough moisture to rehydrate the cuttings and keep them from wilting. Cuttings should be hydrated and in a non-wilted stage within 24 hours after sticking. Cuttings that continue to wilt heavily after 24 hours will callus unevenly and will be delayed in rooting. CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 2–3 days and after cuttings become fully hydrated.

Rec. tray size: 105-cell (30 mm) or larger

Propagation timing: 3.5–4 weeks for a 105-cell liner; add more rooting time for significantly larger liner sizes.

Tech tip: Long-day lighting (day length extension or night interruption) is needed during propagation to avoid premature flowering and tuber formation.

Temperature

Day: 72–74 °F (22–23 °C)

Night: 70–72 °F (21–22 °C)

Average Daily Temperature: 70–74 °F (21–23 °C)

Lighting

Day extension lighting: Necessary to 14 hours

Light intensity: 200–250 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ for the first two weeks after sticking or until root development occurs. Light levels can be increased up to 600 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ as rooting increases and the cutting matures.

Day length response: Facultative short day

Daily light integral (DLI): 4–6 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$ for the first two weeks after sticking or until root development occurs. DLI can be increased to greater than 12 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$ after root formation.

Media pH: 5.8–6.2

Media EC: SME EC: 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm

Fertilizer: Begin fertilization at 100 ppm nitrogen when roots become visible. Rates can be increased up to 200 ppm nitrogen after roots become well developed. Use primarily Cal-Mag® (calcium nitrate + magnesium nitrate) fertilizers in propagation to prevent unwanted stretch.

Pinching: Not recommended

Plant growth regulators (PGRs): Miss Mandy has a moderately vigorous habit and may require a PGR treatment in propagation. If needed to control growth after rooting, sprays of B-Nine® WSG (1,500 ppm) are usually sufficient. A tank-mix spray of Florel® (350–500 ppm) + B-Nine® WSG (1,500 ppm) can also be used to control growth and improve branching. Do not spray Florel® on stressed or weak cuttings. For all sprays listed above, the mist should be off for a minimum of one hour for the PGR to absorb into the leaf tissue.

Finishing

Temperature

Day: 66–68 °F (19–20 °C)

Night: 64–66 °F (18–19 °C)

Average daily temperature: 68 °F (20 °C)

Lighting

Day extension lighting: Beneficial to 14 hours

Light intensity: 800–1,200 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$

Day length response: Facultative short day

Daily light integral (DLI): 16–18 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$

Transplanting: Transplant directly into the finished container. Place the rooted liner relatively deep in the container. Dahlias need deep and sturdy planting to provide good support and balance in the pot for the maturing plants.

Media pH: 5.8–6.2

Media EC: SME EC: 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm

Fertilizer: 200–250 ppm N

Pinching: Not necessary. Pinching will delay flowering by 1 week.

Plant growth regulators (PGRs): Miss Mandy has a sturdy, well-branched habit and will need moderate PGR treatments during finishing. Sprays of B-Nine® WSG at 2500 ppm are recommended at 4 weeks and 6 weeks after transplant to help control growth. Sprays of Florel® at 250 ppm at 4 weeks and 5.5–6 weeks after transplant will also help to control growth and can be used instead of the B-Nine® WSG sprays. The Florel sprays will also help prevent late-season flower peduncle stretch. A Bonzi® drench at 2–4 ppm can be used to hold plants for sale.

Tech tip: The ideal photoperiod during finishing to provide the correct balance between vegetative growth and flower formation is between 13–14 hours. Growing under very short natural days (< 12 hours) will result in short plants, fast flowering, and root tubers. Growing under too long of day lengths will result in an overly vegetative plant and delay flowering. Provide warm temperatures early on in finishing to allow plants to establish after transplant. Miss Mandy grows best under moderately warm temperatures. Avoid extreme heat stress, especially under relatively high light intensities. Scout and treat for a range of insects and diseases, including spider mites, thrips, and powdery mildew.

Moisture level: Media should be allowed to dry between irrigations. Alternate between moisture level 2 and 4.

2 - MEDIUM: Soil is light brown in color, no water can be extracted from soil, and soil will crumble apart.

4 - WET: Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

Common pests: Aphid, spider mites, thrips, leafminers

Common diseases: *Botrytis*, powdery mildew, basal stem rot

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Scheduling

SIZE	CROP TIME	PLANTS PER POT
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	8–10 weeks	1 ppp
3.0 quart to 2.0 gallon (7.5 to 10 inch)	9–10 weeks	2–3 ppp
1.5 gallon container (10 inch container)	10–11 weeks	3 ppp
2.0 gallon container (12 inch container)	10–11 weeks	4 ppp
3.0 gallon container (14 inch container)	10–11 weeks	5 ppp

Estimated finish crop time is from transplant of a 105-cell tray and finished at an average daily temperature (ADT) of 68 °F (20 °C).

Example crop schedule for a 2.5 quart

WEEKS FROM TRANSPLANT	DESCRIPTION
1 week	Provide an average daily temperature of 68 °F (20 °C) and DLI levels above 15 $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$. Pinch plants when they are rooted into the pot. Make sure photoperiod is between 13–14 hours per day.
4 weeks	Apply a spray of B-Nine® WSG at 2,500 ppm or a spray of Florel® at 250 ppm to control growth.
6 weeks	Apply a spray of B-Nine® WSG at 2500 ppm or a spray of Florel® at 250 ppm to control growth. Scout for spider mites, aphids, thrips, and powder mildew and treat if needed.
7 weeks	Apply a broad-spectrum fungicide drench to prevent late-season basal stem and root rot.
9 weeks	Finish



Miss Mandy

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