



## Fresco™, Harlequin™, Hello!™

### DAHLIA X HYBRIDA

**Minimum Germination Rate:** Hello! 80%, Fresco, Harlequin 70%

**Seed Product Form:** Hello! raw; Fresco, Harlequin raw, film coated

### FLOWERING

**Time frame when plants are receptive to flower initiation:** Days 28 – 35; 5 – 7 leaves present.

**Flowering Type:** Obligate long-day plant – long days are necessary for flowering.

**Specific Flowering Mechanism:** Maturity and long days trigger flowering.

### PLUG CULTURE

**Germination:** Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion. Expect radicle emergence in two days.

**Cover:** Cover seeds with a thin layer of medium-sized vermiculite to maintain moisture levels.

**Media:** • pH: 5.5 – 5.8

• EC: 0.5 – 0.75

**Light:** Provide long days starting at sow. Dahlias want to form tubers under short days. Provide interrupted nights for a 12 – 14-hour day to suppress tuber formation.

**Temperature:** 68° – 72°F (20° – 22°C) until radicle emergence. Reduce to 65° – 68°F (18° – 20°C) until cotyledon expansion.

**Moisture:** Saturated (5) until days 2 – 3 or radicle emergence. On days 4 – 7, reduce to moisture level (4). Beginning day 8; start alternating moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4).

**Humidity:** 100% until radicle emergence then reduce to 40 – 70%.

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Plug Bulking:** Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell.

**Media:** • pH: 5.5 – 5.8

• EC: 0.5 – 0.75

**Light:** Keep plug trays under long days. Dahlias want to form tubers under short days. Provide interrupted nights for a 12 – 14-hour day to suppress tuber formation.

**Temperature:** 65° – 68°F (18° – 20°C)

**Moisture:** Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4).

**Humidity:** <50%

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Fertilizers:** Feed with a calcium-based fertilizer (13-2-13 or 14-4-14) at 75 – 150 ppm nitrogen.

**Growth Regulators:** If necessary, B-Nine (daminozide) can be applied at 750 – 1,500 ppm.

*Note: These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.*

### GROWING ON

**Transplant Ready:** 3 – 4 weeks from sow in a '288' tray. Transplant deep so that the cotyledons are at the soil surface. This will produce a more stable plant.

**Finish Bulking/Flower Initiation:** Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container AND to make the plant receptive to flower initiation.

**Media:** • pH: 5.5 – 5.8

• EC: 0.8 – 1

**Light:** Provide long days. Interrupted nights may be needed to simulate long days. Flowering is inhibited by tuber formation, which is only influenced by daylength. Days shorter than 12 hours will promote tuber formation instead of flowering.

**Temperature:** For early spring flowering, optimal growth is best obtained by growing plants at 65° – 70°F (18° – 20°C) nights. Temperature influences the speed of growth and the overall quality of the habit. Temperatures cooler than 62°F (17°C) will slow growth and produce more compact plants, but be sure that interrupted nights or long days are provided to avoid tuber formation.

**Average Daily Temperature (ADT):** 67° (19°C). ADT above 80°F (27°C) will inhibit or abort flower initiation.

**Moisture:** Alternate between moisture levels wet (4) and medium (2). Allow media to approach level (2) before re-saturating to level (4). Watering early in the day and providing good ventilation is important to producing a strong, healthy crop. Do not let plants wilt. Too little water will produce small plants.

**Humidity:** <50%. Dahlias prefer low humidity.

**Dehumidify:** Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

**Fertilizers:** Constant liquid feed at 150 ppm nitrogen with a complete fertilizer containing micronutrients. Increasing potassium at finish will darken the foliage color.

**Pinching:** Due to the naturally branching habit of Hello!, no pinching is necessary.

**Growth Regulators:** If necessary, apply B-Nine (daminozide) at 750 – 1,500 ppm. Also responds to A-Rest (ancymidol), Bonzi (paclobutrazol), Sumagic (uniclazonol), or B-Nine/Cycocel (chlormequat chloride) tank mix. Bonzi can be used at finish to shorten peduncles and not affect the flower size.

**Common Diseases:** Botrytis, Mildew, Smut, Tomato Spotted Wilt Virus

**Common Pests:** Thrips, Red Spider Mites, Whiteflies, Aphids, Leafminers

PRODUCT USE	GARDEN SPECIFICATIONS
Pots, containers, bed borders, mass plantings	<b>Light:</b> Full sun <b>USDA Hardiness Zone:</b> 11 <b>AHS Heat Zone:</b> 12 – 3

	Garden Height	Garden Width
<b>Fresco</b>	10 – 12" (25 -30 cm)	7 – 9" (17 – 23 cm)
<b>Harlequin</b>	12 – 14" (30 -35 cm)	7 – 9" (17 – 23 cm)
<b>Hello!</b>	7 – 9" (17 – 23 cm)	7 – 9" (17 – 23 cm)

### DAHLIA SCHEDULING IN WEEKS

	Fresco	Harlequin	Hello!
<b>Total crop time</b>	9 – 10	8 – 9	9 – 12
<b>'288' plug crop time</b>	3 – 4	3 – 4	3 – 4
<b>Transplant to finish crop time</b>	6 – 7	5 – 6	7 – 8
<b>4" crop</b>	6 – 8	6 – 7	6 – 8