

TECHNICAL GUIDE

Bellis perennis Robella

Flowering

Flowering Type: Day length neutral plant will flower regardless of day length.

Flowering Mechanism: No vernalization required. Irradiance is the primary mechanism that initiates flowering. High light intensity will initiate flowering once plants reach 3-5 true leaves.

Plug Culture

Germination: Maintain optimal conditions for seedling development beginning on the day of sowing until root emergence. Expect root emergence 3–6 days after sowing.

Cover: Cover the seeds lightly with vermiculite.

Sowing Method: 1–2 pellets per plug.

Media: pH 5.5–6.2, EC < 0.7. Bellis are sensitive to high soluble salts in the media.

Temperature: Ensure 20–22 °C (68–72 °F) until radicle emergence. Afterwards, maintain 18–20 °C (64–68 °F) day and night. When roots reach the bottom of the cell, temperature can be lowered to 16–18 °C (60–64 °F).

Moisture: Begin with a wet (4) level for germination, then reduce to moist (3) on day 6. As seedlings develop fully expanded cotyledons, decrease further to medium (2). Bellis are sensitive to watering stress. Protect seedlings from direct sunlight.

Humidity: 95–100% until day 6, then reduce to 40–60%. Provide proper ventilation and horizontal airflow to improve oxygen levels in the media.

Light: Light is not required but can be beneficial in a germination chamber to reduce stretch and improve seedling quality and uniformity. From stage 2, provide 2,000–2,500 ft. candles (20,000–25,000 lx).

Fertilizer: Maintain EC below 0.7, as Bellis are sensitive to high salt levels. Begin feeding at 50–100 ppm nitrogen once germination is complete. Increase to 100–175 ppm as needed.

Plug Bulking and Flower Initiation: Maintain optimal vegetative conditions from cotyledon expansion to flower initiation. When seedlings root to the edge of the plug and reach the 4–6 true leaf stage, flower initiation occurs.

Growth Regulators: No growth regulators are necessary during the plug stage.

Fungicides: Preventative applications are recommended to control soil-borne diseases.

Growing On

Media: pH 5.5–6.2, EC 1.0–1.2. Use a well-drained medium and do not plant the plugs too deeply. It is not recommended to add slow-release fertilizer to the substrate.

Light: Day length neutral plants. Provide 3,500–4,000 ft. candles (35,000–40,000 lx) for the fastest finish.

Temperature: Ensure 16–18 °C (60–64 °F) during days and 10–12 °C (50–54 °F) during nights after transplanting. Afterwards, frost-free production (indoors or outdoors) with a minimum night temperature of 3–5 °C (38–41 °F) is recommended. For outdoor production, a fleece cover is required in case of frost. Cooler temperatures promote a stable, compact and well-branched plant habit. Temperatures above 12 °C (54 °F) will result in large foliage and thin, long flower stems. 4–6 weeks prior shipping, start raising the temperature to 10–12 °C (50–54 °F).

Moisture: Bellis are sensitive to watering stress, so keep the moisture level constantly at a medium (2).

Humidity: 40–60% humidity is ideal. High rates or wet foliage will cause botrytis.

Fertilizer: Moderate fertilization levels are required. Fertilize every two weeks with 100–175 ppm nitrogen using a complete balanced fertilizer. Under low light and cool temperatures, use a potassium-based fertilizer (16-5-25). Avoid high ammonium and high nitrogen levels. Roots are sensitive to high salt levels. Once plants begin to build buds, increase fertilization frequency to avoid chlorosis.

Growth Regulators: B-Nine (daminozide) used as a spray at 1,000–2,000 ppm as required. Bellis are sensitive to high concentrations of propiconazole, which can result in leaf damage.

Fungicides: Do not plant the plugs too deeply. Apply fungicides as needed to control root and leaf diseases.

Common Diseases: Botrytis, rust, mildew.

Pests: Primarily aphids.

Post Harvest: 4–6 weeks prior shipping, raise the temperature to 10–12 °C (50–54 °F).

Plug & Finished Crop Time

Plug Crop Time

288 tray: 5-6 weeks

128 tray: 7-8 weeks

Finished Crop Time (from 288 tray)

Fall: 5-8 weeks

Spring – pack: 12-14 weeks

Spring – 10-12 cm (4-5"): 14-16 weeks

Moisture Codes

Saturated (5) Water is easily observed when finger is pressed on cell. Water moves freely from the top of the plug to the bottom.

Wet (4) Media looks black and is not glistening. The media feels wet to the touch but there is very little water movement.

Moist (3) Water is not easily visible. When finger is pressed on the cell there is very little movement from top to bottom.

Medium (2) Media is not black, but now looks medium brown. There is no water movement when pressed with finger.

Dry (1) Media has changed color to a very light brown and is dry to the touch.

All information in our technical guide is based on our own trials and would therefore be as guideline only. Detailed cultivation aspects vary depending on climate, location, time of year and environmental conditions. Benary expressly disclaims any responsibility for the content of such data/information and makes no representation or warranty for the cultivation of any products listed. It is recommended that growers conduct a trial of products under their own conditions.