Ptilotus exaltatus

Joey®

Item no.: PE2001R

Trendy Breeding Breakthrough

- Unique pot plant
- Extravagant and fluffy flower spikes
- Uniform and easy production
- High germination rate

Crop Time	Spring: 12 - 16 weeks
Height ⌀	13 " / 33 cm
Width ⌀	9 " / 23 cm
Exposure	Sun
Seed Form	Raw Seed
Product Use	Pots, Mixed Containers, Landscape
Family, Origin	Amaranthaceae, Australia
Minimum Germ. Rate	85%

TECHNICAL GUIDE

Ptilotus exaltatus Joey®

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

Flowering Mechanism: Higher irradiance and warmer temperatures will promote earlier flowering. Supplemental lighting during germination is beneficial but not necessary.

Plug Culture
Germination: Expect radicle emergence in 5 days with complete germination in 7 days.

Cover: Requires light for germination. Cover the seed very lightly with vermiculite. The seeds should be visible when watered in.

Sowing method: 1 seed per plug.

Media: Use a well drained media, pH 5.5-5.8; EC 0.5

Temperature: Maintain 23-26 °C (74-78 °F) for the first 7 days, then lower the temperature to 21-24 °C (70-76 °F).

Moisture: Begin with a saturated (5) for the first 3-4 days and then begin to dry them back to a wet (4) on day 5-6. On day 7 begin to alternate between a wet (4) and a medium (2). Allow the moisture level to approach a medium (2) before re-saturating to a wet (4).

Humidity: 95-100 % until day 5, then lower it to 40-60 %.

Light: Requires light for germination. If germinating in a chamber supply 10-100 ft. candles (100-1,000 lx); (50 Watt/m^2) to prevent seedling stretch. Protect seedlings from direct light when moving to Stage II. Once established in Stage II the light levels can be increased. On days 7-10 the light levels can be increased to 6-8 mol/m^2/day (2,000-2,500 ft. candles or 20,000-25,000 lx). Providing a day length > 12 hrs. will promote earlier flowering.

Fertilizer: Maintain an EC < 1.0. Fertilized water should not exceed an EC of 0.5. Initial feeding should be with a balanced fertilizer low in ammonium and phosphorous. Begin feeding on day 7 with a 14-4-14; 14-2-14 or 17-5-17 fertilizer at 50 ppm.

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

Media: pH 5.5-5.8; EC 1.25-1.5.

Light: Continue to protect from direct sunlight until seedlings are well established. On day 21-22 the light levels can be raised to 10-12 mol/m^2 / day or 3,000-3,500 ft. candles (30,000-35,000 lx). Higher light levels will facilitate early flowering and sturdy plants with large flowers.

Temperature: Maintain 20-21 °C (68-70 °F) night and day. When the roots reach the bottom of the cell the temperature can be lowered to 19.5 °C (67 °F).

Moisture: Begin alternating between a wet (4) and a medium (2) on day 7. To prevent algae it is important to begin a good wet to dry cycle on day 12 where the media will dry back within a 24 hr. period. Good ventilation and horizontal airflow will create such an environment. Avoid watering late in the day and never allow plants to stay in a saturated state for a 24 hr. period. Over watered plants will develop yellow lower leaves.

Fertilizer: Begin fertilizing early to improve seedling quality. Under high light conditions slightly higher levels of ammonium can be used. Under high light conditions fertilize with a 17-5-17 feed and under low light use a calcium-based fertilizer 14-2-14 or 14-4-14. Initial feeding should start at 50 ppm and gradually work up to 100-150 ppm.

Growth Regulators: There are several growth regulators that can be used. B-Nine (daminozide) can be applied as a spray at 2,500-5,000 ppm. The higher rates are used under higher temperature and humidity levels. Cycocel (chlormequat chloride) can be applied as a spray at 750-1,000 ppm. Sprays using combinations of B-Nine (daminozide) + A-Rest are also effective. Combine B-Nine at 2,500 ppm + A-Rest at 4 ppm and apply as a spray. Combinations of B-Nine and Cycocel can be used as a spray with 2,500 ppm B-Nine + 500 ppm Cycocel. Bonzi (paclobutrazol) does not seem to be very effective as a growth regulator. Sumagic (uniconazol) sprays at 5 ppm can also be used.

Fungicides: Scout for botrytis and phytophthora during the plug stage and apply specific fungicides per the recommended rate.

Growing On
Media: pH 5.5-5.8; EC 1.2-1.5.

Light: Provide 12-14 mol/m^2/day (3,500-4,000 ft. candles or 35,000-40,000 lx). Well established plants can be grown at 16-20 mol/m2 /day (4,500-5,500 ft. candles or 45,000-55,000 lx).

Temperature: Maintain 20-21 °C (68-70 °F) for the first 14 days or until the roots reach the bottom of the container. Thereafter temperatures may be lowered to 19 °C (66 °F). An ADT (average daily temperature) of 19 °C (66 °F) will give the fastest finished crop.

Moisture: Alternate between moisture levels wet (4) and medium (2). Let plants dry back to a medium (2) before re-saturating to a wet (4). The drying back of the plants will help force the roots to the bottom of the pot.

Humidity: 40-60 % humidity is ideal. Providing good ventilation and horizontal airflow will help lower the humidity and dry back the media, providing oxygen to the roots.

Fertilizer: Moderate to high fertilization levels are required. Avoid high levels of ammonium and high levels of nitrogen. Also keep phosphorous levels lower. Feed with a complete balance fertilizer 14-4-14 or 17-5-17 at 100-150 ppm.

Growth Regulators: Additional growth regulators may be required approximately two weeks after transplanting. Apply the same growth regulator rates as those used in the plug stages as needed.

Fungicide: Apply fungicides during long periods of low light and high humidity. Fungicides against soil borne diseases and foliar diseases are recommended.

Common Diseases: Botrytis and phytopthora.

Pests: Primarily aphids and thrips.

Post Harvest: Fertilize with potassium nitrate at 100 ppm 1-2 weeks prior to shipping.

Timing & Positioning Charts

Plug Crop Time	
288 tray	5-6 wks
128 tray	6-7 wks
Finished Crop Time (from 288 tray)	
10 cm (4") pots (1")	7-8 wks
15 cm (6") pots (1")	8-9 wks
20 cm (8") pots (2-3")	10-11 wks

*plants per pot

Expert Tip

Do not hold plugs since plants should not reach a root bound state. Transplant plugs early or as scheduled. Do not let the temperature levels drop below 10 °C (50 °F). Keep plants on the dry side to promote better roots. Ptilotus develop a good root system very slowly. In periods of low light and lower temperature do not over water. Pinching the plant once well established in the final container has resulted in better branching. This is usually done when the plants reach 7-8 nodes and they are pinched back to 5-6 nodes.

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.

COLORS OF THE SERIES

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