

# Browallia

Endless™



## NUTRITION

**pH:** 5.8 – 6.2

**EC:** (2:1 extraction method) .6 – .9

Constant feeding at 100ppm – 150ppm nitrogen with a fertilizer selected for grower's water quality and soil mix is recommended.

## TEMPERATURE

**Rooting out:** 68 – 72 F

**Growing on:** 68 – 72 F

**Holding:** 65 – 68 F

## WATERING

Maintain moderate soil moisture. Allow the soil to cycle from moist to only slightly dry. Avoid both severe dry downs/wilting and long periods of wet soil especially at cooler temperatures. Growing too wet early in the production cycle can cause disease issues while severe wilt conditions can damage root systems and foliage. Controlling moisture levels and growing at moderate to slightly dry is a good practice to also control plant growth.

## TIMING

**4" – 5":** 5 – 7 weeks with one 84 cell plant per container.

**6"/1GL Royale:** 6 – 9 weeks with one to two 84 cell plants per container.

**8":** 8 – 11 weeks with one to two 84 cell plants per container.

**10" – 12":** 11 – 13 weeks with three to five 84 cell plants per container.

## PLANTING

84 liner cell plants should be planted only slightly deeper than the liner root ball into a well-drained soil mix selected to match individual water quality and fertilizer blends. Water in thoroughly without saturating the mix and maintain a constant moderate soil moisture level for the first seven to 10 days to establish new rooting. The plants have already been pinched once during the 84 tray production cycle. Pinching should not be needed except in the case of taller material at time of planting or for larger containers. For larger containers a second pinch can be performed as needed. Usually a second pinch would be done as a softer pinch used mainly to shape the plant.

## LIGHT/LIGHTING

The Endless™ *Browallia* should be grown in a moderate light level area of the greenhouse for optimal plant development and branching. Greenhouse areas with slightly lower light levels can

also be used if proper temperature, humidity, air movement, and watering practices are supplied.

## GROWTH REGULATORS

Growing under proper light conditions, with adequate spacing, moderate soil moisture levels, and recommended temperatures will produce the highest quality plants and lower the need for any PGR treatments.

Based on plant growth and local weather conditions, B-Nine® (daminozide) can be used at 1,500ppm – 2,500ppm.

## PEST and DISEASE MANAGEMENT

With proper growing conditions and water management disease issues should not be a problem. Control excessive humidity levels in the greenhouse, provide good air movement, do not over fertilize, and provide adequate space. Watch for powdery mildew and Botrytis.

Whiteflies, Thrips, Aphids, and Spider Mites can be pests of concern. Scout crops on a regular basis and use control measures as needed.

*Browallia* are more sensitive to chemical applications than many crops. It may be best to trial any chemicals on a small number of plants previously before applying any chemical to the entire crop. In warm and bright conditions, oils, soaps and emulsifiable concentrate materials have caused leaf edge damage.

## OUTDOOR GROWING SCHEDULE

The Endless *Browallia* are heat loving plants and should be grown outdoors only after the danger of frost has past and temperatures have warmed. The foliage can be damaged from a very light frost or chilling temperatures. At Four Star (Michigan) we would only move these crops outdoors in mid-May if weather allows.

## OTHER TIPS

For proper plant growth and desired finished quality, provide lightly shaded to moderate light conditions in the greenhouse, warm temperatures, adequate spacing, managed moisture levels, and moderate nutrition levels. Maintain proper soil pH and fertilizer levels. If soil pH levels drop below recommended levels, minor element toxicity can develop on lower leaves. Plants should be scheduled and grown in time frames that supply these requirements. In many areas of the country it is best to schedule the Endless *Browallia* for later spring and summer sales.



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The rates and chemicals listed are based on our southeast Michigan growing conditions, and are not recommended for nationwide application. Please adjust the rates and spray applications to your location and facility.