

## Calibrachoa Kabloom

(*Calibrachoa hybrid*)

### Germination

Approximate seed count (pelleted seed): 900 sd/gram;  
25,000 sd/oz

#### Media

Use a well-drained, disease-free media with a pH of 5.5 to 5.8 and an EC of 0.75 mS/cm (1:2 extraction).

#### Sowing

288, 128, 105 and 72 are all suitable sizes. Seed covering is not required.

**Stage 1** – Germination To Radical Emergence 5-7 days continuing through day 14.

**Germination temperature:** 68-77°F (20-25°C) with optimum media temperature of 73°F (22.5°C).

**Special Note:** due to the variability of germination speed, reference following chart:

#### Fast Germinating Varieties:

Kabloom White, Kabloom Deep Pink, Kabloom Yellow  
Stage 1 at 77°F (25°C) for 5 days  
Stage 1 at 68°F (20°C) for 5-7 days

#### Slow Germinating Varieties:

Kabloom Deep Blue, Kabloom Red  
Stage 1 at 77°F (25°C) for 7-10 days  
Stage 1 at 68°F (20°C) for 10+ days

**Light:** Light or dark.

**Media moisture:** Level 5, saturated.

**Relative humidity:** Maintain 100% relative humidity (RH) until radicles emerge.

### Plug Production

**Stage 2** - Radicle Emergence to Cotyledon Expansion

**Average Daily Temperature:** 68°F (20°C)

**Light:** Daily Light Integral (DLI) of =10 moles•m<sup>-2</sup>•d<sup>-1</sup> is optimum; if not possible provide as much light as possible.

**Media moisture:** Reduce moisture level to 4. Do not allow wilting.

**Fertilizer:** Apply fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mS/cm EC) from nitrate-form fertilizers with low phosphorous.

**Growth Regulator:** Spray application after completion of stage 1, approximately day 7-10 depending on the variety and thereafter as needed.

#### Effective PGRs:

Flurprimidol (Topflor): 2-3 ppm (0.53 to 0.79 ml/l, 0.38% formulation)

Paclobutrazol (Bonzi): 3 ppm (0.75 ml/l, 0.4% formulation)

Daminozide\* (B-Nine): 2500 ppm (3.0 g/l, 85% formulation or 3.9 g/l, 64% formulation)

**Special Note:** Daminozide is more effective than Paclobutrazol at tested rates for height control and promoting branching. However, Daminozide can cause chlorotic stippling on Kabloom Red and to a lesser degree on Kabloom Yellow. No stippling with Paclobutrazol or Flurprimidol.

**Stage 3** – Cotyledon Expansion to True Leaves

**Average Daily Temperature:** 64°F (18°C)

**Light:** Daily Light Integral (DLI) of =10 moles•m<sup>-2</sup>•d<sup>-1</sup>

**Media moisture:** Cycle between levels 2 and 4. Do not allow wilting.

**Fertilizer:** Increase the fertilizer rate to 2 (100 to 175 ppm N/ 0.7 to 1.2 mS/cm EC). If growth is slow, apply a balanced ammonium and nitrate-form fertilizer with every other fertilization. Maintain a media pH of 5.5 to 6.0 and EC between 1.0 and 1.5 mS/cm (1:2 extraction).

#### Growth Regulators:

Using same rates and application method as noted in Stage 2, every 10-14 days, as needed.

#### Stage 4

**Temperature Range:** 55-64°F (13-18°C). No lower than 55°F (13°C).

**Light:** Daily Light Integral (DLI) of  $\geq 10 \text{ moles} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$

**Media moisture:** Cycle between levels 2 and 4. Do not allow wilting.

**Fertilizer:** Same as Stage 3.

**Growth Regulators:**

Using same rates and application method as noted in Stage 2, every 10-14 days, as needed.

## Growing On to Finish

**Container Sizes**

4-6 inch (10-15 cm) Pots and Quart: 1 plug per pot  
10 inch (25 cm) Basket: 3 plugs per pot  
12 inch (30 cm) Basket: 5 plugs per pot

**Media**

Use a well-drained, disease-free soilless medium with a pH of 5.5 to 5.8 and a medium initial nutrient charge.

**Average Daily Temperature**

55-64°F (13-18°C).

Can be cool-grown, similar to vegetative calibrachoa. Cool-growing will delay flowering compared to warm temperature production.

**Light**

Daily Light Integral (DLI) of  $\geq 10 \text{ moles} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$

**Photoperiod Response**

All Kablooms are facultative long day with exception of Deep Pink, which is obligate long day. Reference the following table for minimum daylength requirement for each variety.

**Variety:** Kabloom Yellow, Kabloom White - 10 hours

**Variety:** Kabloom Red - 10.5 hours

**Variety:** Kabloom Deep Blue - 11 hours

**Variety:** Kabloom Deep Pink - 12 hours

**Limited Inductive Photoperiod (LIP)**

Results from experiments conducted at Michigan State University indicate that Kabloom juvenility ends at 6 leaves (6 weeks from sowing). After the end of juvenility, growing under long-day photoperiod ( $\geq 14$  hours or night interruption) for 4 weeks in plug trays or

finish containers induces plants to flower. After induction, flowers continue to develop if grown under short-day photoperiod. Please conduct your own trials to test LIP under your conditions before broad use.

**Fertilizer**

Apply nitrate-form with low phosphorus fertilizer at rate 3 (175 to 225 ppm N (1.2 to 1.5 mS/cm EC) every other irrigation. Apply a balanced ammonium and nitrate-form fertilizer with low phosphorus as needed to encourage growth and to balance media pH. Maintain media pH 5.5 to 5.8.

For constant fertilizer program, apply fertilizer at rate 2 (100 to 175 ppm N or 0.7-1.2 mS/cm EC) while maintaining the above recommended EC and pH ranges.

**Growth Regulators**

Paclobutrazol 1 to 3 ppm (0.25 to 0.75 ml/l, 0.4% formulation) drench 7-10 days from transplant, reapply as needed.

Uniconazol (Sumagic) applied in rates similar to those used for mid-vigor vegetative calibrachoa.

**Special Note:** In finished production Kabloom White is more receptive and sensitive to paclobutrazol. Too heavy or too frequent applications may result in excessively compacted or stunted plants.

To determine the best rate for your conditions, we recommend that you run an in-house trial.

**Special Note: Pinching**

Apical dominance results in poor branching. The causes include:

Overgrown and spindly plants

Low DLI (keep  $\geq 10 \text{ moles} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$ )

Excessive plug crop time

Inadequate plug height control

Pinching is a good solution to remedy the situation. Pinching can occur in plug trays (shear) or after transplant.

Pinch at transplant: Soft pinch, leaving 4 basal nodes.

Pinch can delay flowering; the extent of the delay depends upon the timing and location of the pinch.

Do not pinch if using LIP.

**Crop Scheduling  
Plug Crop Time**

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**Tray Size:** 288

**Crop Time from Sow to Pullable:** 5-6 weeks

**Tray Size:** 128

**Crop Time from Sow to Pullable:** 7-8 weeks

**Tray Size:** 105

**Crop Time from Sow to Pullable:** 7-8 weeks

**Tray Size:** 72

**Crop Time from Sow to Pullable:** 7-8 weeks

### **Finish Crop Time from Non-Pinched Plugs**

**Container Size:** 4-6 inch (10-15 cm) Pots and Quarts / 1 PPP

**Crop Time from 288 Plug to 100% Flowering:** 7-8 weeks

**Total Crop Time from Sow to 100% Flowering:** 12-13 weeks

**Container Size:** 10 inch (25 cm) Basket / 3 PPP

**Crop Time from 288 Plug to 100% Flowering:** 9-11 weeks

**Total Crop Time from Sow to 100% Flowering:** 14-15 weeks

**Container Size:** 12 inch (30 cm) Basket / 5 PPP

**Crop Time from 288 Plug to 100% Flowering:** 9-11 weeks

**Total Crop Time from Sow to 100% Flowering:** 14-15 weeks

### **Common Insect and Disease Problems**

Manage similar to vegetative Calibrachoa

**Note:** Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. Chemical and PGR recommendations are only guidelines. It is the

responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

**Kabloom White:** 'PAS1020307' PPAF; EU PBRAF; CA PBRAF; JP PBRAF

**Kabloom Yellow:** 'PAS1020308' PPAF; EU PBRAF; CA PBRAF; JP PBRAF

**Kabloom Red:** 'PAS1020342' PPAF; EU PBRAF; CA PBRAF; JP PBRAF

**Kabloom Deep Blue:** 'PAS1020344' PPAF; EU PBRAF; CA PBRAF; JP PBRAF

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