

# Verbena

## Superbena® & Superbena® Royale



### NUTRITION

**pH:** 6.0 – 6.4

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

Constant feeding at 150ppm – 200ppm nitrogen with a fertilizer selected for grower's water quality and soil mix is recommended.

### TEMPERATURE

**Rooting out:** 65 – 72 F

**Growing on:** 65 – 72 F

**Holding:** 50 – 60 F

### WATERING

Maintain moderate soil moisture. Allow the soil to cycle from moist to slightly dry. Avoid both severe dry downs/wilting and long periods of wet soil, especially at cooler temperatures. Follow the plant grouping suggestions listed below under Growth Regulators to assist in proper water management.

### TIMING

**4" – 5":** 4 – 6 weeks with one 42 cell or 84 cell Supernova® plant per container.

**6"/1GL Royale™:** 6 – 7 weeks with one to two 42 cell or 84 cell Supernova plants per container.

**8":** 7 – 8 weeks with two to three 42 cell or 84 cell Supernova plants per container.

**10" – 12" Hanging Basket:** 9 – 11 weeks with three to five Standard 84 plants per container.

Crop time ranges are based on early season to later peak season plant performance and wholesale grower to retail size expectations.

**Supernova 42 liners are used at Four Star and are recommended for best flower timing, flower count, and plant size in smaller containers.** Supernova 84s can also be considered. Supernova 84s may finish about 1 week later than the Supernova 42s. The Supernova 84 finishes faster and more consistently than Standard 84s. They offer an option that balances shipping costs with improved performance. If Standard 84s are used for small container production, supplemental lighting, additional crop time, pinching, and additional PGR applications may be required.

Supernovas are not recommended or required for baskets and large containers, but many growers are beginning to use them for early hanging basket and upright needs. Growth habit and timing may be different than from Standard 84 liners, but flowering time and "retail ready" containers can be produced in portions of the year when not possible from a standard liner. If mixing Supernova and Standard liners in combination plantings, a pre-plant drench of Sumagic® (uniconazole) or Bonzi® (paclobutrazol) to the **Standard liners** may be helpful to even out plant growth and vigor.

### PLANTING

Superbena® should be planted into a well drained soil mix selected to match individual water quality and fertilizer blends. Water in without saturating the mix and maintain a constant moderate soil moisture level for the first seven to 10 days for establishing new rooting. Plants have already been pinched once during the production cycle. When using Supernova treated liners, NO pinching is required unless deemed taller than desired. If Standard liners are used, pinch at transplant if size allows. Superbena branch quite well and pinching is not needed, except for "shaping" purposes.

### LIGHT/LIGHTING

Superbena should be grown in a high light area of the greenhouse for optimal flowering and plant development. Superbena Supernova liners have been treated for earlier flowering and will not require additional grower lighting. If very early crops are scheduled before the onset of 12-hour natural daylengths, daylength extension lighting is helpful. Also, if growing from Standard 84 liners, additional lighting to 14 hours/day lighting is required for early spring finish dates. Additional PGR (plant growth regulator) treatments may also be required on non-Supernova treated plants.





## GROWTH REGULATORS

Either a light spray of Sumagic at 5ppm – 10ppm or a 1ppm – 2ppm Bonzi drench can be applied to control growth, as required. Treatments are usually made to smaller containers seven to 14 days after planting. Treatments to larger containers can be made when a desired “pre-finished” size is attained (three to four weeks before scheduled finish date). Watch for the “softening” look and lighter green appearance of new growth as an indication for PGR treatment needs. In more northern areas, the lower rates should be used as a starting base, while in more southern areas, the higher rates will probably be needed. Other materials such as Topflor® (flurprimidol) and Piccolo® (paclobutrazol) can be used at rates that correspond with the degree of treatment recommended for Sumagic or Bonzi.

Proper growing temperatures, high light levels, proper spacing, and good growing practices can be very helpful at managing plant size. Supernova treated plants should require fewer PGR treatments than Standard 84 liners.

**When using Supernova liners, please refer to the Supernova Culture Guide for specific PGR recommendations. Florel® (ethephon) is not recommended for use with Supernovas, except possibly with *Nemesia* and *Diascia*.**

PGR requirements vary between the standard Superbena and Royale Superbena. For supplying proper watering practices and PGR applications, they can be grown in the following two groupings:

- 1) Burgundy, Coral Red, Dark Blue, Large Lilac Blue, Pink Shades, Purple, and Violet Ice are more vigorous. Within this group, Burgundy and Large Lilac Blue are the most vigorous and should be watched for possible additional or higher treatments.
- 2) Royale Chambray, Royale Cherryburst, Royale Iced Cherry, Royale Peachy Keen *Improved*, Royale Plum Wine, Royale Romance, and Royale Whitecap are average to slightly below average vigor and will require little to no PGR treatments. While Royale Red, Sparkling Amethyst and Sparkling Ruby are more vigorous and most likely will require a PGR treatment.

## PEST and DISEASE MANAGEMENT

Whitefly, Thrip, and Aphids can be an issue. Preventative treatments or regular scouting should be considered. Proper growing environments and watering practices should be followed to avoid Botrytis, Powdery Mildew, and various stem or root rots.

## OUTDOOR GROWING SCHEDULE

Superbena *Verbena* should be grown outdoors only after the danger of frost has past and weather is consistently warm (mid to late May in Michigan). The foliage can be damaged from a very light frost. This recommendation is based on average spring weather and should be adjusted for unseasonably severe or unseasonably mild conditions.

## OTHER TIPS

- Supernova treated liners are highly recommended for growers’ small container production.
- For best combination planting performance, consider vigor for all plants used, especially if mixing Supernova treated plants in with non-Supernova treated plants.
- Maintain proper soil pH levels. A soil pH below the upper 5s can lead to iron toxicity. This will show in the older foliage as a fine rusty to brown leaf spotting.
- Superbena are fairly heavy feeders and especially the more vigorous varieties need to be fed on a regular basis with adequate fertilizer levels, to maintain proper growth and leaf coloration.
- **Burgundy, Coral Red, Royale Chambray, Royale Iced Cherry, and Royale Whitecap can flower slower than other Superbena or Royale types. Royale Iced Cherry is the most compact Royale.**
- Scout for Powdery Mildew. Consider a preventative treatment with a material such as Compass® (trifloxystrobin).