



# Verbena Empress Series



Appropriate for containers and flower beds, this versatile series can tolerate almost any weather condition

By P. Allen Hammer and Brad Kunhardt

This new verbena series is easy to grow, offering a semi-upright habit so they are appropriate for containers and flower beds. Empress verbena are tolerant of both heat and cold, and are nice additions to gardens over a wide range of geography. They prefer full sun and moderate amounts of water, growing to 6-12 inches tall.

For spring 2011, Dümmen is offering 16 varieties in the Empress series. Several distinctive colors feature a light center to the flower, offsetting the deeper color of the petals. These are known as Charme varieties, such as 'Empress Dark Red Charme' and 'Empress Violet Blue Charme', both new for 2011. They join the popular Strawberry Charme, Purple, Dark Red and other returning Empress varieties.

Empress verbena are delivered as vegetative cuttings, skillfully prepared at Dümmen's off-shore facilities in Central America. The following guide will help ensure proper preparation for successful rooting and transplanting, and healthy and appealing plant growth.

## Rooting

Use a rooting medium with well-aerated soil structure. After sticking, water the cuttings uniformly for a good "soil to stem" connection.

Maintain temperatures between 65° and 75° F day and night. To enhance and promote uniform root development, apply bottom heat at 72-75° F.

Mist for four to six days, as needed and until roots begin to push into medium. Excessive misting can result in disease and leaching of nutrients.

Set light levels to 1,000-2,000 foot-candles during rooting. After cuttings have established roots, increase light levels to 2,500-4,500 foot-candles.

As soon as they start to root, fertilize cuttings with 100 ppm of 20-10-20 fertilizer.

A rooting hormone is not needed. A PGR can be applied to control stretch. PGR applications can be applied beginning one week after sticking.

To control disease after plants have rooted, avoid excessive watering. Avoid low light, as light levels play an important role in plant health and growth. Also avoid low temperatures.

## Transplanting

Use a sterile, well-aerated root medium with a pH of 5.5-6.2. Root medium should contain an initial nutrient charge. Maintain nutrient levels by alternating between 150-200 ppm of 15-0-15 and 20-10-20.

Use only new, clean medium and containers; all surfaces that cuttings contact should be sterile.

Before transplanting, water rooted cuttings well and moisten finish container medium.

## Growing a High-Quality Empress Verbena

Alternate liquid feed of 200-300 ppm of 15-0-15 and 20-10-20. Excess ammonium may cause soft growth and internode stretch. Leach regularly to maintain an EC of 1.5-2.0

Verbena is sensitive to both drying out and being too wet. Manage water and humidity to reduce occurrences of diseases like Botrytis.

Grow at 65-75° F during the day and 60-65° F at night with good circulation. Too low a temperature can cause leaf necrosis. Increase light levels to 5,000-6,000 foot-candles.

Promote basal branching with a hard pinch (above the fourth or fifth set of leaves) once plant roots reach the edge of container. Additional pinching will improve plant fullness.

Florel (ethephon) applied two weeks after transplanting will promote branching and can replace pinching. Additional applications can be made, but delay flowering. B-Nine (daminozide) can be used to reduce plant stretch. Verbena also responds to negative DIF.

Low temperatures slow growth and may cause leaf yellowing. Proper water management will reduce disease occurrences.

## Scheduling

Empress verbena are easy to schedule for early spring through summer. A 4-inch pot with one plant will take six to eight weeks in early spring and four to six weeks in summer. Growing in a 10-inch pot with four to six plants takes eight to 10 weeks in early spring, and seven to nine in summer. ☒

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