

# Supernova<sup>®</sup> Liner Culture Guide



Supernova<sup>®</sup> 42 liners offer faster turns and consistent flowering. Supernova 84 liners balance shipping cost with improved performance. Supernova liners have been treated to provide a blooming, salable plant in a 4" – 6" container in four to six weeks. Supernova 84s take one to two weeks longer to finish than Supernova 42s. While not recommended for hanging baskets or uprights, some growers use them for better flower coverage for early season plantings.

Treatments given to Supernova liners to control vigor are temporary and will lose effectiveness in three to six weeks, depending on growing conditions.

As a general guideline, follow the cultural guidelines and the growth regulator information below for helpful tips on growing Supernova liners. More specific information can be found on Four Star's individual variety culture sheets.

## NUTRITION

**pH:** 5.8 – 6.2. For Superbells<sup>®</sup> *Calibrachoa* and Supertunia<sup>®</sup> *Petunia*, maintain a lower pH of 5.5 – 5.8.

**EC:** (2:1 extraction method) .5 – .8

*As is true with all Proven Winners<sup>®</sup>, soil pH and EC levels must be properly maintained.*

## TEMPERATURE

Supernova liners grow and perform best at an average temperature of 65 – 68 F. Colder temperatures are possible but will delay flowering. Angelface<sup>®</sup> *Angelonia* do not flower well below 68 – 72 F.

## WATERING

Containers grown from Supernova liners should be kept moderately moist, but not saturated. More frequent, lighter watering is best, as over-watering and fertilization encourages vegetative growth and flower delay.

## LIGHT/LIGHTING

Placing in the brightest greenhouse location available is recommended. Low light and warm temperatures will produce a soft plant that grows together rapidly, produces fewer blooms, and may require more PGR (plant growth regulator) treatments. Early season plantings flower best when given continued long days via either daylength extension or night interruption lighting.

## PINCHING

None is required or recommended. This would remove the initiated flowers.

## FLOREL<sup>®</sup> (ETHEPHON)

It is not recommended on most Supernova varieties as initiated flowers would be aborted. However, *Nemesia* flower very readily and often benefit from one application of 500ppm four to six days after planting.

## GROWTH REGULATORS

Certain varieties within a genera may require different growth regulator treatments, depending on plant size and vigor. Under Four Star Greenhouse growing conditions, we use this chart as a guideline. These rates are based on ½-GL of solution per 100 square feet for sprays. Follow recommended levels for drenches, based on container size. Do not apply under bright, sunny conditions, as this can cause leaf burn.

Growth regulators may not be necessary for Supernova 84s.

A Growth Regulator Treatment Guide is shown on the following page.

## SUPERTUNIA VISTA<sup>®</sup> BUBBLEGUM<sup>®</sup> – 4.25" Grande<sup>™</sup> at 4 Weeks



Standard 84 liner



Supernova<sup>®</sup> 84 liner



Supernova<sup>®</sup> 42



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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.

# Supernova<sup>®</sup> Liner Culture Guide Continued



## SUPERNOVA<sup>®</sup> 42 GROWTH REGULATOR TREATMENT GUIDE

Variety	Growth Regulator Recommendations		
	Bonzi <sup>®</sup> drench (paclobutrazol)	Sumagic <sup>®</sup> spray (uniconazole)	B-Nine <sup>®</sup> spray (daminozide)
<i>Angelonia</i>		5ppm – 10ppm	
<i>Argyranthemum</i>	1ppm – 2ppm	5ppm – 10ppm	
Superbells <sup>®</sup> <i>Calibrachoa</i>			
Blue, Lemon Slice, Plum, Pomegranate Punch	2ppm – 3ppm	10ppm – 20ppm	
Blackberry Punch, Cherry Blossom, Strawberry Punch	1ppm – 2ppm	5ppm – 10ppm	
Coralina, Cherry Red, Dreamsicle, Evening Star, Garden Rose, Grape Punch, Hollywood Star, Miss Lilac, Pink, Saffron, Spicy, Tequila Sunrise, White, Yellow	1ppm	5ppm – 10ppm	
Cherry Star, Coralberry Punch, Holy Moly! <sup>™</sup> , Morning Star, Red, Sweet Tart, Yellow Chiffon		5ppm – 10ppm if needed	
SunPatiens <sup>®</sup> <i>Impatiens</i>			2500ppm
<i>Nemesia</i>		5ppm – 10ppm	
Infinity <sup>®</sup> <i>New Guinea Impatiens</i> *	1ppm – 2ppm <b>(Bonzi spray)</b>		
Supertunia <sup>®</sup> <i>Petunia</i>			
Bermuda Beach, Black Cherry, Charms, Flamingo, Giant Pink, Honey, Latte, Lavender Skies, Really Red, Royal Velvet, White	1ppm – 2ppm	5ppm – 10ppm	
Bordeaux <sup>™</sup> , Minis, Picasso in Blue <sup>™</sup> , Picasso in Pink <sup>®</sup> , Picasso in Purple <sup>™</sup> , Raspberry Blast, Royal Magenta, Vistas	2ppm – 3ppm	10ppm – 20ppm	
Pretty Much Picasso <sup>®</sup>	3ppm – 4ppm	20ppm	
Surfinia <sup>®</sup> <i>Petunia</i>	1ppm – 2ppm	5ppm – 10ppm	
<i>Salvia</i>			2500ppm
<i>Scaevola</i>			
Pink Wonder <sup>®</sup> , Whirlwind <sup>™</sup> Blue		5ppm if needed	
New Wonder <sup>®</sup> , Whirlwind <sup>™</sup> White		5ppm – 10ppm	
Lanai <sup>®</sup> <i>Verbena</i>			
Bright Pink	2ppm – 3ppm	10ppm – 20ppm	
Blue, White, Red, Royal Purple w/Eye, Upright Purple Mosaic	1ppm – 2ppm	5ppm – 10ppm	
Superbena <sup>®</sup> <i>Verbena</i>	2ppm – 3ppm	10ppm – 20ppm	
Superbena <sup>®</sup> Royale <i>Verbena</i>	1ppm – 2ppm	5ppm – 10ppm	
Tukana <sup>®</sup> <i>Verbena</i>			
Raspberry		5ppm – 10ppm	
Scarlet, Scarlet Star	1ppm – 2ppm	5ppm – 10ppm	
Meteor Shower <sup>™</sup> <i>Verbena Bonariensis</i>	1ppm	5ppm – 10ppm	

As a general rule, apply growth regulators 7 to 10 days after transplanting.

More vigorous varieties may need an additional 1ppm – 2ppm Bonzi drench or 5ppm – 10ppm Sumagic spray, depending upon growing conditions.

\* Ruffles<sup>™</sup> *New Guinea Impatiens* — None needed.