Four Star Greenhouse

Supernova® Program
What is a Supernova®
What is a Supernova® Liner?

- Supernova liners are high-performance plugs that are the result of years of development, trialing and testing
- Supernova liners are available exclusively from Four Star Greenhouse
- There are 5 different sizes of Supernova plugs offered
- Each Supernova liner size has a specific purpose and application
- Only the crops that benefit from the Supernova treatment are offered as Supernova plugs
- Supernova liners are available to all growers throughout the U.S.
**Supernova® Usage Chart**

*Each Supernova liner size has a specific purpose and application*

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Supernova® 42 & 84
The Supernova® Story

Supernova® 42 liners are the original Supernova from Four Star

• Over 15 years ago, Four Star partnered with Michigan State University to conduct a series of trials.
• Trial Goal: To develop the perfect liner for small container production. The liner must be well-branched, have multiple bud sets, flower consistently and create the best-looking retail product.
• Research revealed that a series of treatments in the liner tray were much more effective than trying to treat the liner after transplant.
• We also learned that we can use the 84-cell size as a natural growth regulator for improved plant habit.
• For the past 16 years Four Star has been the leader in research and development of high performance liners for small container production.
• We are constantly evaluating the program and varieties to make sure the Supernova liners are the best possible product for growers.
The Supernova® 42 Process

• All Supernova 42 crops are started in a custom 84-liner spacer tray.
• They are rooted in and moved out to our dedicated Supernova growing ranges.
• The trays are separated into 2 – 42 liner trays.
• The spaced trays allow for maximum light and air flow to the liners.
• The flowers and buds are aborted.
• The bud set is reinitiated with a combination of temperature and lighting treatments.
• Several crops are pinched to encourage bulking and branching.
• The crops continue to grow in our Supernova ranges under high-pressure sodium lighting with heated flood floors.
Supernova® 42 Growing Range

State-of-the-art facilities
Advantages of Supernova® 42 Liners

A plug that is compact and well-balanced with consistent bud set is ideal for retailers

- Reduce 4.5” crop times by 1 – 2 weeks
- Reduce 1.0 GL crop times by 2 – 3 weeks
- Consistent flowering ensures the entire crop is ready on time, at the same time
- Earlier flowering
- Higher flower count per plant
- Fewer, if any, growth regulators are needed
- Increased branching
- Faster rooting
- Improved shelf life at retail

Butterfly from a Supernova® 42 Four weeks old
Butterfly from a Standard 42 Four weeks old
Supernova 42 Comparison

Superbells® Blue

Superbells® Blue from a Supernova® 42
Four weeks old

Superbells® Blue from a Standard 42
Four weeks old
Finished Crops

Young 1.0 GL Royale crops grown from Supernova® 42 liners
Finished Crops

Four-week old Supertunia® Royal Velvet from Supernova® 42 liners
Finished Crops

Consistent flowering makes shipping Supernova® crops easy
Supernova® 42 Varieties

Only the crops that benefit from the Supernova treatment are offered in the Supernova liners:

- Angelface® series *Angelonia*
- Butterfly series *Argyranthemum*
- Superbells® series *Calibrachoa*
- Bluebird *Nemesia*
- Compact Innocence® *Nemesia*
- Supertunia® series *Petunia*
- Surfinia® series *Petunia*
- Evolution, Blue Frost, Playin’ the Blues® *Salvia*
- New Wonder® series *Scaevola*
- Whirlwind® series *Scaevola*
- Lanai® series *Verbena*
- Meteor Shower® *Verbena*
- Superbena® series *Verbena*
- Tukana® series *Verbena*

* Superbells Apricot Punch and Supertunia Limoncello and Priscilla are not offered as a Supernova 42
The Supernova® 84 Story

Supernova 84 liners balance freight costs with improved performance.

• Goal: To offer an improved plug for small container production, compared to Standard 84 liners.

• Continued research has shown that some varieties can be treated in a full 84-tray without spacing.

• They offer growers another choice with the “Good - Better - Best” philosophy.

• Supernova 84 liners receive the same treatment as Supernova 42 liners, but are not spaced.

• These plugs have some of the benefits of Supernova 42s such as improved branching, slightly decreased crop times and earlier flowers when compared to a Standard 84 liner.

• Supernova 84s also have lower freight costs when compared to Supernova 42s.
Liner Comparison

Supertunia® liners

GOOD

BETTER

BEST

Standard 84

Supernova® 84

Supernova® 42
Liner Comparison

Butterfly *Argyranthemum*

GOOD

BETTER

BEST

Standard 84

Supernova® 84

Supernova® 42
Liner Comparison

Superbells® Blue *Calibrachoa*

GOOD

BETTER

BEST

Standard 84

Supernova® 84

Supernova® 42
Supernova® 84 Varieties

Only the most popular crops that benefit from the Supernova treatment are offered in the Supernova 84 liners:

- Angelface® series *Angelonia*
- Butterfly series *Argyranthemum*
- Superbells® series *Calibrachoa*
- Supertunia® series *Petunia*
- Pink Wonder® *Scaevola*
- Whirlwind® series *Scaevola*
- Superbena® Royale series *Verbena*

* Angelface Super series
Superbells Coralberry Punch and Plum
Supertunia Pretty Much Picasso and Priscilla
are not offered as a Supernova 84

Four Star Greenhouse
Supernova® 50 & 28
Supernova® 50

Infinity®, Ruffles® and Sunpatiens® series are offered in the Supernova 50 tray

• Enhanced plugs that are perfect for small container production
• Earlier, more uniform flowering for the entire series
• Large, developed root system

Supernova® 50 liner

Infinity Blushing Crimson
7 weeks from a Supernova® 50

Infinity Red
9 weeks from a Supernova® 50
Supernova® 28 Story

We offer 2 types of Supernova 28 liners:
Supernova 28 Thrillers for combination pots and larger container production
Supernova 28 Perennials for quick turn perennials

Supernova 28 Thriller
• Designed to be the height, or thriller, element in combination pots
• Gives the thriller a “jump start” when planted with 84 liners
• Can also be used for quick 1.0 GL turns
• Liners are bulked and pinched for quick rooting and growth after transplant.

Supernova 28 Perennial
• Developed to decrease crop times on many popular perennial varieties
• Allows growers to finish perennial crops alongside annual crops
• Ideal for 1 GL and larger containers
• Plugs are vernalized, initiated and bulked to make it simple and easy for growers once they receive the liners. All liners are ready for transplant at the time of delivery.
Supernova® 28 Thriller Varieties

Angelface® series Angelonia
Santa Cruz® Begonia
San Francisco® Begonia
Senorita® series Cleome
Dahlightful® series Dahlia
Dalina® Grande series Dahlia
Mystic Illusion Dahlia
Cordylena® series Dracaena
Spikes Dracaena
Steel Tower™ Eucalyptus
Diamond Frost® Euphorbia
Blue My Mind® Evolvulus

Stratosphere® series Gaura
Grasses:
Graceful Grasses® Blue
Mohawk®, ‘Fireworks’, Purple
Fountain,
Red Riding Hood, ‘Sky Rocket’,
Toffee Twist, Vertigo®
Luscious® series Lantana*
Butterfly series Pentas
Ablazin’® series Salvia
Blue Frost, Evolution Salvia
Playin’ the Blues® Salvia
Meteor Shower™ Verbena

* Luscious Grape, Lemonade and Pina Colada are not offered as a Supernova 28 Thrillers
Supernova® 28 Perennial Varieties

Fruit Punch® series Dianthus
‘Paint the Town’ series Dianthus
Prairie Winds® Series Grasses
Karl Foerster, Overdam Grasses
‘Tuscan Sun’ Heliopsis
Dolce® series Heuchera
Fun and Games® series Heucherella
Shadowland® series Hosta
Sweet Romance® Lavandula
Amazing Daisies™ series Leucanthemum
‘Bottle Rocket’ Ligularia
‘Leading Lady’ series Monarda
‘Pardon My’ series Monarda
‘Cat’s Meow’ Nepeta
‘Denim ’n Lace’ Perovskia
’Opening Act’ series Phlox
Color Spires® series Salvia
‘Jade Peacock’ Tiarella
‘Charlotte’s Web’ Tradescantia
Magic Show® series Veronica
Thank you!