Spring Production Guide

8 New Crops!

Download The New Grower's Guide App

THE **SUNTORY**® COLLECTION

Download The

NEW GROWER'S GUIDE APP Today!



Complete cultural information for the entire Suntory catalog

- Portable and user friendly
- Sort crops by temperature, light and fertility requirements.
- View crop times at a glance.

- Video library and links to YESS! tools
- Customize by choosing the brands you grow and sell.











THE **SUNTORY** COLLECTION

Spring Production Guide

Contents



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SUNTORY COLLECTION

Check Out Our New Grower's Guide!

Welcome to the fourth edition of Suntory's Spring Production Guide, your hand-

book for growing successful crops this coming season. We've expanded it from 36 to 52 pages to include eight more crops, including brand new categories, such as Sundiascia diascias and Sunbelia lobelias.

You'll find friendly advice from our licensed growers with many years of experience producing Suntory crops. We've also added a few key points that will help you with your buying decisions. For the more established brands, we share the Top 3 best-selling varieties. We also highlight the differences between Suntory genetics and others on the market, as well as recent trials recognitions that demonstrate outstanding garden performance.

But the most exciting project has been developing our new Grower's Guide app! (See facing page.) Designed for iPad tablets, this digital resource fully integrates The Suntory Collection Catalog and Spring Production Guide. You can also view a table of all the crops to see crop times and plants per pot and also sort by cultural requirements, such as temperature, light and fertility. When connected to the Internet, you can access the video library and all our YESS tools – Your Easy Suntory Solution.

Free Digital Tools

Through YESS, Suntory invests in modern technology to benefit the entire supply chain all the way to the consumer. The new Grower's Guide app and mobile phone site make it easy to check production details. On the grower's video channel menu, there is a video version of each article in this printed guide, as well as growers sharing tips and benefits. Another handy tool is the ability to download and print bench cards and posters, customized with your logo, pot size and price.

For gardeners, we present planting and care videos and a series of quick howto projects at two different homes. Consumers can target the part of the home or yard they want to beautify outside and see several ideas. The Virtual Combo Designer app continues to be a hit with everyone who tries it and was promoted extensively this year.

We've also launched a new app that's an interactive consumer publication called Easy Gardening Tips. Gardeners can explore colors and styles and receive expert advice on gardening basics. The app's Flower Finder is a handy tool to search our entire catalog for the right plants. A zip-code driven geolocator then directs consumers to garden centers in their area.

Turn to page 50 to see all the YESS tools you can use to engage your customers and perfect your production.

Your Guide to Growing The Suntory Collection

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Tips for Producing

Sungelonia Angelonias

Sungelonia angelonias bring significant improvements to growers and the garden market. Three gorgeous colors – Blue, Deep Pink and White – have been bred to be more compact and uniform across the series with excellent branching. Flowers contrast beautifully with glossy, dark green foliage. Sungelonias produce abundant blooms on dense, 4 to 10-inch spikes, while maintaining a well-balanced form.

Spring & Summer Performance

While other angelonias tend to fall open or get floppy as they mature, Sungelonias provide a sturdy, upright, elegant look. They are also earlier to flower, making it easier for growers to hit the prime sales window in May instead of waiting for later in the summer. Angelonia's common name is Summer Snapdragon because it is associated with summer performance, thriving in heat and humidity while also being drought tolerant. Sungelonias will continue to bloom profusely and retain their shape. They reach a height of 12 to 15 inches with a spread of 8 to 12 inches.

General Culture

Grow Sungelonia angelonias in a well-drained peat/perlite mix and keep soil pH between 5.5 and 6.2. Recommended pot sizes for finishing are 4-inch and 6-inch. Crop times are as follows:

- 4-inch pots six to seven weeks with one liner and one pinch
- 6-inch pots seven to nine weeks with one or two liners and one pinch
- 10-inch pots 10-12 weeks with three liners and two pinches

Recommended Uses

Sungelonias are versatile as annuals anywhere. Plants bloom continuously, April through November, and thrive in full sun. Sungelonias can be used in patio containers by themselves, in combination with other plants, or in the ground as bedding plants and landscape borders. Ideal companions for mixed plantings include Suntory's Temari and Tapien verbenas, Surdiva scaevolas, trailing Million Bells calibrachoas, mecardonia and Marietta bidens.







Helpful Hints from John Barone



Barone Garden Cicero, New York

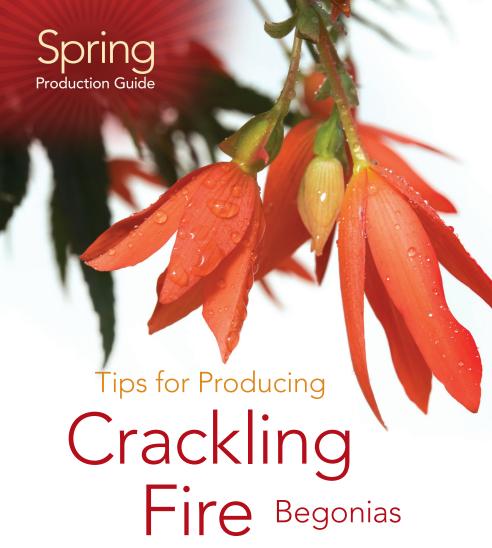
I've grown Sungelonia for two seasons now and have been quite impressed. They are more compact and are earlier to flower than other series out on the market. They still like warmer temperatures and are better suited for the latter half of May in Northern areas. We did not use any plant growth regulators and pinched them once with great results. They have super deep-green foliage and excellent flower count. They are just gorgeous and easy to grow. Sungelonias work well in containers and combinations. They finish well in 4-inch and 5-inch pots. Use multiple liners for pots that are 8 inches or larger.

Experience the Suntory Difference!

- Elegant, upright habit
- Uniform through series
- Compact, well-balanced form

Sungelonia series – 2012 Prairie Star Winner, Kansas State University

Sungelonia Deep Pink –
Excellent Rating, University of Minnesota
2012 Top Picks, Plantpeddler trials



General Culture Start with certified clean material from Suntory licensees. When plants arrive, water if necessary and pot them as soon as possible. Larger plugs can be planted later, as they will finish faster. Use a good quality bedding plant mix. Watering During production, it is wise to not

water excessively, as begonias are prone to rots. This style begonia has strong drought resistance and does not need a lot of water. Begonias do not like high humidity and can rot when it is too moist.

Lighting

This style begonia can receive a lot of light and hardly needs shade. During the growing season, the more light the better.

RACKLING FIRE is the → next generation of boliviensis begonias. Plants are loaded with flowers, easy to grow and have a sturdy, compact and upright habit that prevents breakage. Crackling Fire is more sun tolerant than other begonias and presents well as a premium 4-inch item or hanging basket. This series has been very popular in Europe and six colors have been selected to be uniform across the series: Red, Orange, Pink, Yellow, Creamy Yellow and White.

Crop Timing

- 4-6 inch pots pots finish in four to eight weeks with one liner.
- 10-inch baskets finish in eight to 12 weeks with three liners.

Temperature

These begonias like warm temperatures. For optimal results, grow at 68°F or higher for several weeks after potting. Later, temperatures can be reduced to 60°F. Crackling Fire will not tolerate frosts and are not suited for growing under cool temperatures.

Feeding

Keep substrate pH between 5.2 and 6.0. Lean toward basic feeds versus acidic to prevent iron and manganese toxicity. Choose a Calcium Nitrate-based feed or a neutral feed,





such as 17-5-17 at 150-200 ppm. Use a peat-lite growing mix.

Growth Regulators

Crackling Fire does not require chemical growth regulation. Water and fertility management are the best methods to control growth of Crackling Fire. Using less water and fertilizer will result in more compact and earlier flowering plants. Using more will result in larger

plants that flower later. Cycocel has proven to be effective at suggested rates of 750-1250 ppm. Another option is to spray 3000 ppm B-Nine, if needed. Do not use growth regulators on 'Crackling Fire White.'

Pests & Diseases

Crackling Fire is not very sensitive to most pests. Monitor for thrips in the summer. Early morning watering and warm temperatures are best to prevent foliar diseases. Be careful with overhead watering and make sure the crop always dries before nightfall. Also watch for Powdery Mildew. Xanthomonas is known in begonias as leaf spot disease. Spray if needed. Viruses are not a problem if you use certified clean young plants. Start with a clean greenhouse. When pinching, disinfect hands and tools regularly. **



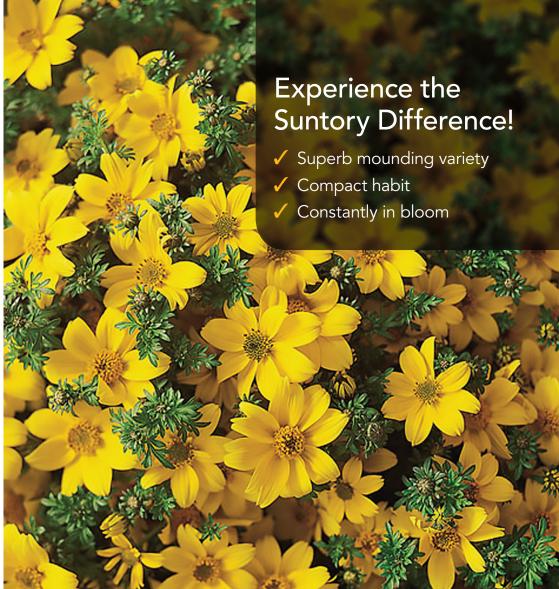
Tips for Producing

Marietta Bidens

ARIETTA BIDENS is a proven performer in this well-known species. It has a superb mounding habit that remains compact. Flowers are self-cleaning and very tolerant of all types of weather. This variety is very heat tolerant and has a strong, vibrant color. Marietta can be used in pots, hanging baskets, combination plantings, window boxes and landscapes.







General Culture

Marietta bidens fits in nicely with other key vegetative annual crops in terms of timing and cultural requirements. Less pinching is required when plants are grown cool.

Watering

Maintain moderately moist soil.

Lighting

Marietta bidens prefers high to moderate light levels, between 5,000 and 8,000 footcandles.

Crop Timing

- 4-inch pots 5-7 weeks with one liner and one to two pinches
- 6-inch pots seven to 10 weeks with one liner and two pinches

• 10-inch baskets – 10-12 weeks with three liners and two to three pinches.

Temperature

Keep day temperatures between 65-75°F and night temperatures between 55-60°F.

Feeding

Maintain soil pH 5.5-6.5. Feed with complete water soluble fertilizer at 200 ppm.

Growth Regulators

No growth regulator is needed because Marietta bidens is naturally compact.

Pests & Diseases

Monitor plants for whiteflies, aphids and mites. **









Sunvillea Bougainvilleas

Suntory has revolutionized another genus, bougainvillea, reining it in and making it more manageable as a blooming potted plant. Sunvillea bougainvilleas

debuted at the Tropical Plant Industry Exposition in 2011 and were a big hit, winning the Best New

Flowering Plant Award based on attendee

votes. That same year, Sunvillea was a finalist for Greenhouse Grower's Reader's Choice Award after receiving the most votes in the "Best of the Rest" category.

Mini But Mighty

Sunvilleas are miniature bougainvilleas that bloom immediately, even in the liner stage. Because Sunvilleas are genetically dwarf, no plant growth regulators are required. Plants are compact and tight with dense foliage and available in three colors:

- Rose a deep pink that's almost magenta
- Pink light salmon-pink
- Cream yellowish cream bracts with hints of deeper yellow
 In contrast to typical bougainvilleas, the controlled growth makes more presentations possible, including small pot sizes.

General Culture

When potting rooted cuttings, do not let plugs dry out to the point of wilt until plants are well rooted in three to four weeks. Use potting media that drains well with good aeration. Sunvilleas prefer full sun, so keep light levels high to moderate, between 5,000 and 8,000 footcandles. Maintain moderately moist soil. Never let pots sit in water. Allocate enough space for each plant to avoid contacting the leaves of another plant.



Crop Timing

For 4-inch production, plant one plug per pot and pinch three weeks after potting. Plants will bloom weeks later. For 6-inch production, plant one plug per pot and pinch three weeks after potting and then again six weeks after potting. Plants will flower five to six weeks after the last pinch.

Temperature

Keep temperatures warm – 60-65°F at night and 80-85°F during the day at any stage to keep constant growth. The higher the temperature, the better the crop will grow. Cooler temperatures will slow growth.

Feeding

Use a combination of slow-release fertilizer and liquid fertilizer. Use one fourth the rates of slow-release fertilizer, such as Osmocote, Nutricote or Plantacote. For liquid fertilizers, use 25-5-15, 20-10-20 or 21-7-7, if pH of water

Helpful Hints from T. Jay Higgins

Sun-Fire Nurseries, Sarasota, Florida



Sunvillea is a very compact series of bougainvillea. Plants will grow to a maximum height of two to three feet. Sunvillea comes in Rose (bright fuchsia color), Pink (soft pink) and Cream (really soft yellow, cream explains it well). This is a unique plant for customers as it blooms almost constantly. It can be grown in anything from a 4-inch pot to a 3-gallon. Sunvillea also makes a nice hanging basket. It can also be grown upright as a standard. A 4-inch pot can be finished in as little as 10 weeks in warmer climates. In production, this will be very similar to other bougainvilleas. You do not want to let them dry out all the way, as they will defoliate. But at the same time, they do not like to have "wet feet." Use a well-draining soil and keep it slightly moist. The plant will be in full flower about six weeks after the last pinch.

is 7.0 or higher. Bougainvilleas prefer ph of 5.5 to 6.0. High pH will cause iron deficiency, which can be corrected with drenches of iron sulfate.

Pests & Diseases

Insects to watch for include aphids, caterpillars and mites. Prevent leaf spots by avoiding wet leaves overnight. **



Tips for Producing

Surdaisy Brachyscomes

HIS DELIGHT from Down Under has been praised for its durability and floral display. Native to Australia, brachyscomes are commonly known as Swan River daisies. Surdaisy produces hundreds of flowers for continuous color March through October. Durable plants withstand cold, rain and sun. Surdaisy varieties were bred for excellent branching. Pink has the largest flowers and darkest foliage. Yellow is unique and has an airy, upright meadow look. White and Mauve make excellent groundcovers. The varieties work great in combinations and as a mono crop.

General Culture

Grow Surdaisy as a bedding plant. It can be grown as a summer annual, potting weeks 8-10 and finishing in 10-13 weeks as a 4-inch pot, depending on the temperature. Another option is to grow like a winter viola, potting in September and selling in late March, grown cold.

Plants grow slowly in the cold. Surdaisy also has small leaves, which makes it a slow starter. Grow at warmer temperatures in the young plant stage.

Surdaisy is always in flower, so remove flowers regularly to enhance vegetative growth. Surdaisy also needs several pinches to branch nicely.

Watering

Maintain moderately moist soil. During cold temperatures and in the young plant stage, avoid watering too much. Surdaisy will use more water in warmer temperatures and when the plant is larger.

Lighting

Surdaisy prefers high to moderate light levels, between 5,000 and 8,000 footcandles.

Crop Timing

- 4-inch pots finish in four to six weeks with one liner and one pinch.
- 6-inch pots finish in six to eight weeks with one or two liners and one pinch.
- 10-inch baskets finish in eight to 10 weeks with four to five liners and two pinches.

Less pinching is required when plants are grown cool.

Temperature

Maintain day temperatures between 65-75°F and night temperatures between 55-60°F.

Feeding

Maintain soil pH of 6.0-6.5. Feed with a complete water-soluble fertilizer at 100-200 ppm. Add chelated iron in the fertilizer program.

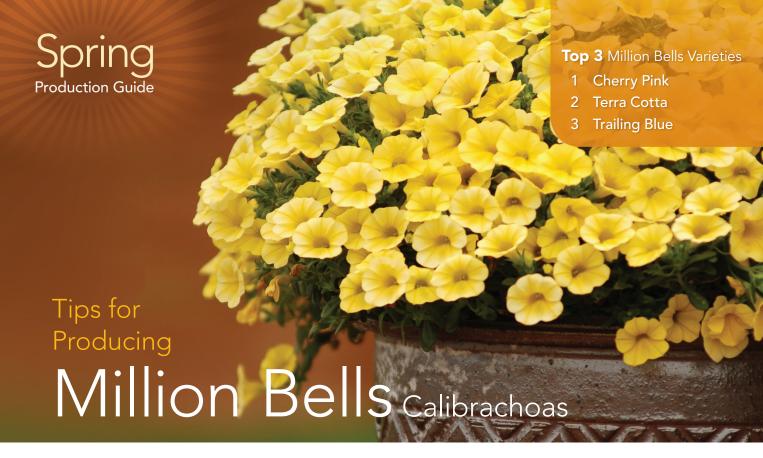
Growth Regulators

While no growth regulator is needed for Surdaisy plants, it does help prevent stretching.

Pests & Diseases

Monitor plants for thrips, whiteflies, aphids and mites. Use a broad-spectrum fungicidal drench after planting. **





ILLION BELLS are versatile plants that are suited to hanging baskets, patio containers, window boxes and landscapes. Suntory breeders Yasuyuki Murakami and Dr. Kenichi Suzuki are the fathers of the entire calibrachoa genus for commercial production. Starting out with just a few colors, today the popular series spans reds, blues, oranges and yellows and splashy patterns like Crackling Fire and Terra Cotta.

Suntory continues to reinvest in and improve the series, which now spans 12 mounding types, seven trailing types and the new Bouquet subseries, which appeals to growers looking for more compact varieties for high-density production. The original trailing types are still best sellers because of their vigorous growth, profuse blooming and ability to create lush, cascading displays, especially in hanging baskets.

Proven Performance

Calibrachoas are annuals in Zones 2-8 and can be perennials in Zones 9-12. Heat tolerant, cold hardy and prolific, Million Bells produce flowers from spring well into fall. Each summer, Million Bells stands out among hundreds of calibachoas to earn high marks in leading university trials.

General Culture

Calibrachoa is a facultative longday plant. Provide long days during propagation and production, if possible, although modern breeding has made great advances in bringing the flowering timing forward. Once cuttings are rooted and established, liners can be given a pinch to encourage a bushy plant. This is usually around three to four weeks after sticking. If this is not done by rooting stations, it should be done by the grower at potting or just afterwards. As the crop grows, it may require more pinching to encourage the right habit and breaks to get bushy, spreading plants. Rooted cuttings should be potted up as soon as possible into 4-inch or larger

Allan Says: What is not to love about Million Bells? Not only did they start this entire Calibrachoa explosion, but every year when we trial them, they more than hold their own.

- Dr. Allan Armitage

Experience the Suntory Difference!

- Easy to grow, self-cleaning
- ✓ Impervious to heat and rain
- Blooms all season

Million Bells Bouquet Brilliant Pink – 2012 Top Ten Performer, University of Minnesota

Million Bells Trailing Yellow – 2012 Top Performing Plants, The Ohio State University

Million Bells Trailing Magenta – 2012 Prairie Star Winner, Kansas State University

pots, using using a well-drained peat/perlite mix. Keep pH at 5.2 to 6.0 to prevent disease and nutritional problems.

Temperatures of the crop at this stage should be 65-70°F for the first couple of weeks. This will enhance root development. After two weeks, the crop is best grown at 60-65°F.

Avoid overwatering Million Bells. Watering is a key issue. High levels will encourage root rot, so a little-and-often regime is encouraged when plants are young to provide as much air to the crop as possible.

Crop Timing

- 4-inch production four to six weeks with one liner and one or two pinches
- 6-inch production six to eight weeks with one liner and two pinches
- 10-inch production 10-12 weeks with three liners and two or three pinches

Growth Regulators

Million Bells responds to sprays

of B-Nine (2,500-5,000 ppm) or Sumagic (5-20 ppm). Another option is a Bonzi drench (2-3 ppm)

Pests & Diseases

Insect pests to monitor include whitefly, western flower thrips, aphids and red spider mites. Diseases to prevent include Botrytis, Powdery Mildew, Phytophthora, Rhizoctonia, Pythium and Thielaviopsis. **





F YOU'RE looking for drought and heat tolerance, you can't beat Suntory Chrysocephalum 'Silver Leaf Yellow' in landscapes. Plants bloom from early spring into fall, producing bright yellow flowers banked by mounded, silvery gray-green foliage. Plants produce flower heads that look like little golden buttons in clusters. They are very easy to grow and maintain, love high light and heat. Flowers are self-cleaning. Ideal applications include landscapes, containers, hanging baskets, as a groundcover and in rock gardens. Chrysocephalum has also been presented as a species of helichrysum.

General Culture

Suntory Chrysocephalum fits in nicely with other key vegetative annual crops. Propagation can be performed at any time if root zone temperature is maintained. In warm weather, plants produce roots very quickly, within 7-9 days. Growers will see best results during warm months of the year. When growing in pots,

medium to hard pinching is recommended after flowering to create compact, bushy plants.

Watering

Keep plants slightly on the dry side but avoid wilting. Use smaller-sized cell propagation trays (for example 162-cell tray). Larger sizes tend to hold more water and increase potential for rotting. Reduce misting under cloudy conditions. Overall, it is important to reduce water during wet and cloudy conditions.

Lighting

Chrysocephalum likes high light levels, 5,500-8,300 footcandles. Shade plants 50% the first week, then increase to 100% sunlight after 2-3 weeks.

Experience the Suntory Difference!

- ✓ Impervious to heat
- ✓ Easy to grow, self-cleaning
- ✓ Excellent for landscapes

Silver Leaf Yellow – 2012 Prairie Star Winner, Kansas State University

2010 Plant of Merit, University of Georgia

Crop Timing

- 4-inch pots four to five weeks with one liner and one pinch
- 6-inch pots six to eight weeks with one liner and one pinch
- 10-inch baskets 10-12 weeks with three liners and one pinch

Temperature

Maintain day temperatures between 72-80°F and night temperatures between 55-65°F

Feeding

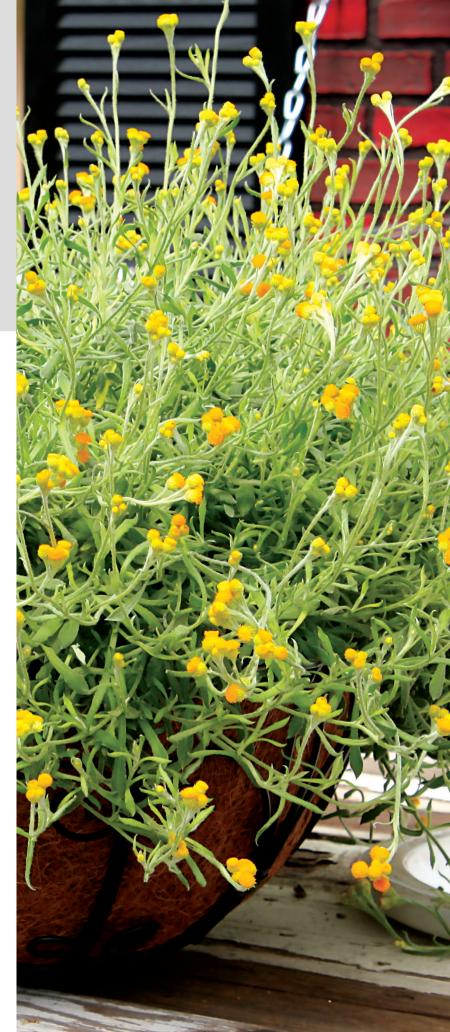
Keep pH between 6.5-7.0. Use a constant feed of a complete water soluble fertilizer, 100-150 ppm. Fertilizer is not recommended during the first three weeks of propagation, but after three weeks, a general liquid feed can be used. Slow-release fertilizer can be applied 1-2 weeks after potting. Alternate between watering with liquid feed and clear water. For instance, fertilize Monday, Wednesday and Friday and use clear water on Tuesday and Thursday.

Growth Regulators

If needed, use B-Nine at 2500 ppm.

Pests & Diseases

Monitor plants for whiteflies, Western Flower Thrips and botrytis. Drench plants with a preventative fungicide at the time of sticking cuttings. Prevent rot by keeping plants on the dry side, especially during wet, cloudy weather. Do not over water. **





Secrets of Producing

Sundiascia Diascias

CUNDIASCIA Is a completely new form of diascia that offers market benefits along with a stunning show of color. Tall stems display 3-inch flower spikes boldly. This new shape also saves growing and shipping space and prevents breaks from the center. Plants are more heat tolerant than typical diascia but Sundiascia is not a summer crop. Colors include Upright Orange, Upright Blush Pink and Upright Rose Pink.

General Culture

Sundiascia is ideal for an early spring program but can also be grown with warmer crops and bloom longer into the season through early summer. Longer days will create taller flower spikes. Mix in early season containers as a gorgeous upright thriller.

Watering

Maintain moderately moist soil.

Lighting

Sundiascia prefers moderate to low light levels, but can take full sun in the garden once established.

Crop Timing

• 4-inch pots – five to seven weeks with one liner and two pinches

- 6-inch pots seven to nine weeks with one to two liners and three pinches
- 10-inch baskets nine to 11 weeks with four to five liners and no pinch

Temperature

Maintain temperatures between 70-75°F during the day and 60°F at night.

Feeding

Keep pH between 5.6-6.0. Use a constant feed of a complete water soluble fertilizer, 200 ppm.

Growth Regulators

Spray 10-15 ppm Sumagic. Apply as needed. Be very light with plant growth regulators for taller flower spikes.

Pests & Diseases

Watch for Botrytis on finished flowers







PRINCETTIA euphorbias offer opportunities to be presented as a premium gift plant year round. Available in four gorgeous shades of pink plus Max White, Princettia is perfect for pink holidays, including Valentine's Day, Easter and Mother's Day. Another prime opportunity is October for Breast Cancer Awareness Month. Plants are naturally compact with excellent branching, producing many flowers without pinching.

General Culture

Princettias are a euphorbia hybrid, so many of the same cultural practices used to produce poinsettias successfully are the same. However Princettia varieties are more compact with smaller bracts than most commercial poinsettia cultivars. Minor adjustments to culture should be made accordingly when Princettia varieties are produced with poinsettias.

Princettia varieties branch freely. In smaller container sizes, pinching is not a requirement. However, in larger containers (6 or 6.5", 15-17 cm,) pinching will produce a fuller plant. Consider using Cycocel after the pinch or the Florel® sandwich technique before and after pinch to enhance uniform branching. If Cycocel or Florel are used, monitor height closely after the application. This may be the only time plant growth regulators are needed throughout production.

The bracts and leaves of Princettia are also smaller than traditional poinsettias. Because of the smaller bract size, it is not recommended to grow Princettia using cold-grow techniques that can be used for some poinsettias. Grow and finish Princettia warm to produce the highest quality plants.

Watering

Because Princettia varieties are compact, irrigation frequency should be adjusted to reflect the slower growth rate. Monitor root health and avoid overwatering.

Lighting

Princettia varieties are photoperiodic. Depending of the time of year plants are produced, photoperiod manipulation with lighting or black cloth will be necessary.

Crop Timing

- 4-inch pot one liner, 10 weeks
- 6-inch pot one liner, 20 weeks

Temperature

Recommended temperatures:

- Propagation Day 76-82°F/Night 70-74°F
- Growing On Day 80-82°F/Night 70-72°F
- Finishing from short days Day 72-75° / Night – 65-68°F
- Temperatures can be adjusted to change the rate of flower development, however, night temperatures should never go below 62°F.

Feeding

Fertility needs are very similar to poinsettias, however, due to the

compact nature of Princettia, monitor EC of the media closely to ensure the rate of fertilizer is not too high compared to the growth rate. Ideally, the EC should range from 5.8-6.2 mmhos/cm. Consider using 250 ppm 15-5-15 cal/mag complete with micro nutrients.

Growth Regulators

Princettia varieties are much more compact than most commercial poinsettia cultivars. In most cases, plant growth regulators will not be needed. In larger product forms, additional vegetative growth should be added

If height control is needed, Princettia responds very well to B-Nine®/ Cycocel® in propagation and Cycocel alone after transplant. Consider the following rates:

Production Schedule For Market Windows

October May 21 (Week 26)
November July 2 (Week 30)
December July 16 (Week 28)
February Sept. 17 (Week 37)
March Nov. 5 (Week 44)
May Dec. 17 (Week 50)

Ready for Retail Oct. 8 (Week 40) Nov. 19 (Week 46) Dec. 3 (Week 48) Feb. 4 (Week 5) March 18 (Week 11) May 6 (Week 18)

Recommendations for 6.5-inch pots

- Propagation B-Nine 1000 ppm / Cycocel 1000 ppm
- After transplant Cycocel 750 1250 ppm
- Do not apply Cycocel after the sign of first color.

Pests & Diseases

Insect pests and diseases that impact poinsettias also impact Princettia. Monitor closely for whiteflies and watch root health throughout production. As flowers develop monitor for botrytis. **

Keys to Success: • Do not over growth regulate. I

- Do not over growth regulate. In most cases Princettia can be grown without using PGR's.
- Grow and finish Princettia warm. If temperatures are too cool, the growth rate will be slow and flower development delayed.
- Do not overwater Princettia varieties, which are more compact and will likely require water less frequently than more vigorous poinsettias.
- Pay attention to the natural photoperiod and provide artificial manipulation, if necessary, depending on the time of year.



- ✓ Gorgeous colors
- ✓ Naturally compact
- Excellent branching

2010 First Prize Innovert Gold Medal at Solon du Vegetal, France

2009 Gold Medal at Green Expo Sydney, Australia

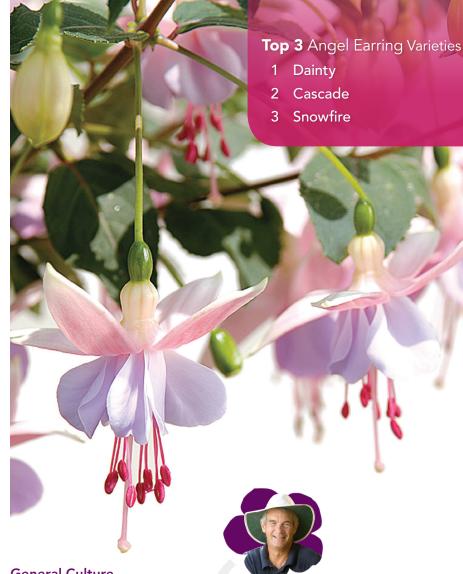
2009 Silver Medal at Floral Gent, Belgium

Spring

Tips for Producing

Angel Earrings **Fuchsias**

untory's Angel Earrings In the state of th ance, greater sun tolerance and a much higher flower count, expanding the possibilities for planting. The plants are also more compact and more controlled than most fuchsias, increasing production density and shelf life. The Preciosa, Dainty, Double Red and Mauve have upright habits that are ideal for patio pots, window boxes and as bedding plants. Traditional trailing varieties, Cascading and Snowfire, shine in hanging baskets. And the semitrailing White offers the best of both worlds.



General Culture

Rooted cuttings should be potted up as soon as possible into 4-inch to 10-inch pots. Use a well-drained peat/perlite mix with a pH of 6.0-6.5. After potting, rooted liners should receive a light watering in. The crop is best kept on the dry side to aid root development. Once roots are established, maintain moderately moist soil.

Slow-released fertilizer can be used. The crop should be watered uniformly throughout its life using a liquid nitrogen fertilizer at 200 ppm, changing to a higher potash feed as buds become clearly visible. After two weeks, plants will grow quickly and start to produce vigorous trailing shoots. These can be pinched to enable the plant to bush out and make a good breaking habit.

Allan Says: Being a Montreal boy, I love fuchsias but realize they are not heat lovers. However, compared with most others we have trialed, I would not hesitate in recommending Angel Earrings anywhere. They are still fuchsias, but they are among the best for heat tolerance. – Dr. Allan Armitage



Pinching the crop is important to achieve a nice, compact breaking plant. Light and space also are important to achieve the required habit. If the cutting received a pinch at propagation and a further one is needed, it is best to pinch at four nodes.

The use of plant growth regulators (PGRs) is not necessary, but growers have achieved good results with daminozide and paclobutrazol. Various PGRs can be used to control internode elongation, including ancymidol and daminozide. Drenches of paclobutrazol or uniconazole can be used. DIF (the mathematical difference between day and night temperatures) will also control height.

Keep temperatures at 65-75°F during the day and 55-60°F at night.

Lighting

Fuchsias are generally long-day plants and prefer moderate to low light. Plants are easily brought into flower by night interruption for two weeks. Levels should be moderate to low during production to help reduce stretching. Photoperiod management can induce earlier flowering by having daylight extension to 13 hours or using a four-hour night interruption before weeks 13/14 to promote flowering, especially if your daylength at that time of year is less than 13 hours.

Crop Timing

• 4-inch pots finish in six to eight

Helpful Hints from Danny Takao

Takao Nursery, Fresno, California



Angel Earrings fuchsias have the ability to keep flowering even in our warmer weather, and in Fresno, we get quite warm. They have a higher flower count and are self-cleaning, making maintenance for gardeners a breeze. They come in a nice array of colors and habits. Angel Earrings look best in 1-gallon pots to larger sizes and hanging baskets, depending on the habit you choose – upright, trailing or semi-trailing. They are also more compact than traditional fuchsias, which makes them easier to ship. For pots, use the uprights such as Dainty, Double Red, Mauve and Preciosa. For baskets or combos, use Cascading, Snowfire or White, because they have more of a trailing habit.



weeks with one liner and one pinch.

- 6-inch pots finish in seven to 10 weeks with one liner and two pinches.
- 10-inch pots finish in 10-12 weeks with three liners and two to three pinches.

Less pinching is required when plants are grown cool.

Pests & Diseases

Insects to monitor for include whiteflies, thrips, aphids, leaf miners, red spider mites, snails and slugs. Key diseases to prevent include Botrytis, Thielaviopsis, Powdery Mildew, Phytophthora and Pythium. Botrytis is more of an issue on finished flowers and foliage. Broadspectrum fungicides are recommended to prevent and control diseases. **

- 1 Lime
- 2 Bronze
- 3 Maple

Tips for Producing

Desana Ipomoeas

ommonly known as sweet potato vine, ipomoeas have become the most popular trailing accent in mixed containers and baskets. They also fill out beds quickly. Suntory's Desana line of ipomoeas features a compact habit with short internodes in four dramatic colors – Lime, Maple, Bronze

and Compact Red. Desanas make excellent 4-inch and 6-inch finished pots. They also work wonders in combinations by adding color, texture and drama without dominating complementary plantings. Desanas thrive in warm, humid climates. Plants reach a length of up to 7 feet and spread 18 to 42 inches.

General Culture

Rooted cuttings should be potted up as soon as possible in 4- to 6-inch pots, using a well-drained peat/perlite mix with pH of 6.0-6.5.

Temperatures of the crop at this stage should be 72-80°F during the day and 60-65°F at night. This will help roots develop. Do not overwater at this stage. Growth will stop at temperatures of 45-48°F or lower.

Light levels should remain medium to high at 4,000-7,000 footcandles. Internodes are likely to stretch under low-light conditions.

Water plants uniformly using a complete water soluble fertilizer, such as 100-200 ppm nitrogen, 20-10-20 and 15-0-15. A little extra iron is beneficial. Aim for an EC of 1.5 to 2.0. Foliage color may change in response to fertilizer levels. Maintain moderately moist soil.

This crop may require pinching to encourage the right habit and breaks





to get a bushy and spreading plant. Generally, a 4-inch pot will finish in four weeks. Pinching encourages branching.

Plant Growth Regulators

Uniconazole (Sumagic) sprays are effective at 10-25 ppm. Florel sprays can be used at 500-1,000 ppm. B-Nine is effective at 2,500 ppm as needed. Finally, a drench of paclobutrazol (Bonzi) can be used at 8 ppm on plugs prior to transplanting.

Crop Timing

- 4-inch pots four to five weeks with one liner, no pinches.
- 6-inch pots six to eight weeks with one liner, no pinches.
- 10-inch pots 10 to 12 weeks with three liners, two to three pinches

Pests & Diseases

Key insect pests to monitor are thrips, aphids, fungus gnats, shore flies and mites. Diseases to prevent are Phytophthora and Pythium. A broad-spectrum fungicide drench is recommended after planting. Edema is a common disorder in all stages of the crop. Prevention rather than cure is the best option. To prevent edema, always allow the substrate to dry between irrigations and provide good air movement. Edema is the bursting of cells, resulting in corky lesions on the foliage, accentuated by low light or high humidity. Symptoms are usually on the underside of foliage, but in some cases it can be seen on the upper surface. **



Sunbelia is available in three light colors – Compact Sky Blue, Compact Pink and Compact White.



General Culture

Rooted cuttings should be potted up as soon as possible into 4- to 6-inch pots. Plant them in a well-drained peat/perlite mix. Growers should keep in mind Sunbelia's growth habit is much more compact and controlled than other lobelias. It is upright with dense, heavy flowering. Sunbelia is not trailing and not recommended for hanging baskets.

Watering

Maintain moderately moist soil.

Lighting

Sunbelia prefers high to moderate light levels, between 5,000 and 8,000 footcandles.

Crop Timing

- 4-inch pots four to six weeks with one liner, one pinch.
- 6-inch pots five to seven weeks with one liner, one pinch.

Temperature

Maintain day temperatures between 65-75°F and night temperatures between 55-60°F.

Feeding

Keep pH between 6.0-6.5. Use a constant feed of a complete water soluble fertilizer, 100-200 ppm.

Experience the Suntory Difference!

- Most compact lobelia from cuttings
- High-density branching
- Good summer performance

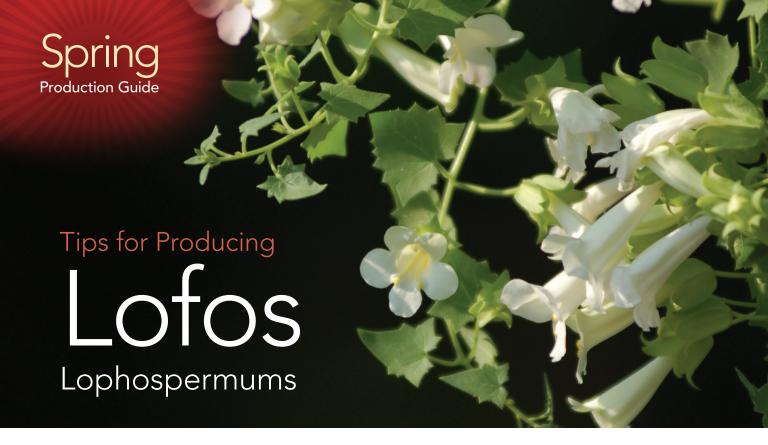
Growth Regulators

No plant growth regulator is needed. Sunbelia varieties are naturally compact.

Pests & Diseases

Monitor for Sunbelia for whiteflies, aphids and mites. A broad-spectrum fungicidal drench is recommended after planting. **





originating from the Mexican mountains, lophsopermum is a genus of eight species and is deciduous and evergreen – perennial climbers and shrubs from the slopes of North and Central America. Foliage is generally triangular and plants produce tubular to funnel-shaped flowers in shades of white and purple. Lofos is grown as an annual and is well suited to planting spectacular hanging baskets and window boxes or guided up trellises. This marvelous vine blooms early, continuing through most of the year until frost. Lofos is now available in two forms with the new Lofos Compact series. While the classic Wine Red and White trail to 7 feet, the new Compact

White and Compact Rose have more flowers and reach a length of 2 feet. Lofos Compact is easier to manage and ship. Both forms make stunning presentations. Growers can produce Lofos in hanging baskets and pots ranging in size from 1 gallon to 5 gallons and command a premium for this unique, elegant item.

General Culture

Rooted cuttings should be potted up as soon as possible into 4- to 6-inch pots. Use a well-drained peat/perlite mix and maintain soil pH between 6.0 and 6.5. After potting the liners, give plants a light watering. The crop is best kept on the dry side to aid root development. Keep plants slightly dry but avoid wilting. Temperatures for the crop at this stage should be 60-65°F for the first two weeks. This temperature range will help roots develop. After two weeks, the crop will grow quickly and



Helpful Hints from Aaron McDonald

Botany Lane Greenhouse Lafayette, Colorado

Lofos is one of my favorite plants. It's unique and different from anything else on the market. Now with two colors in each the Lofos and Lofos Compact series, you can plant multi-color pots where the plants truly blend together. Suntory has done a great job matching the habit and color of the plants so they look the same. Lofos is ideal for hanging baskets as a mono or a component plant. It can also be trained onto a trellis for a different look in the garden. One pinch after the initial planting will help to develop breaks in the plants. But once plants are trailing, you will not want to pinch, as the flower buds are on the vine. If they get a little long, just wrap them in on themselves. Once Lofos is in flower, it will have blooms from the top all the way to the end of the vines. Plant growth regulators are not needed on Lofos.

start to produce vigorous trailing shoots. These can be pinched to enable the plant to bush out and develop a good breaking habit. Pinching the leading shoots helps control the growth. Lofos is responsive to Florel, too. Keep light levels high to reduce stretching.

The crop should be watered uniformly using a balanced liquid fertilizer, transitioning to a higher potash feed as buds become clearly visible.

Crop Timing

- 6-inch pots six weeks with one liner
- 1-gallon pots eight to nine weeks with one liner and two pinches
- 10-inch pots/baskets 10-12 weeks with three liners and two or three pinches

Pests & Diseases

Monitor for aphids, fungus gnats, whiteflies, leaf miners, red spider mites, shore flies, slugs, snails and western flower thrips. Diseases to prevent include Botrytis, Powdery Mildew, Rhizoctonia, Phytophthora and Pythium. A broad-spectrum fungicide drench is recommended after planting. **





CUN PARASOL is the brand • for Suntory's collection of mandevilla hybrids. The genus mandevilla has many subgroups, including sanderi, boliviensis and amoena, which are all known for their climbing or trailing properties. Until recently, sanderi was the leading variety in North America. However, the market for mandevilla has changed dramatically with the arrival of Sun Parasol. The popular Crimson varieties are the first that stay true to color. 'Sun Parasol Garden Crimson' is capturing a lot of attention as the first bedding plant mandevilla.

Sun Parasol mandevillas are classified into four groups:

• The Originals come in Crimson, Pink, Cream Pink, Dark Red and White with bushy, compact growth and medium-sized flowers. Exciting novelties – Stars & Stripes and Burgundy – are available in limited supply. Plants have good branching, neat foliage and are natural climbers suitable for pots, hanging baskets, balconies or as bedding plants and house plants.

• The Giants are available in White, Pink, Crimson and Carmine King. The new Red Emperor is the best giant red mandevilla yet, with superior disease resistance and the ability to produce even more large flowers. They have a vigorous growing habit, coarse foliage and are natural climbers suitable for patios, balconies and as house plants in sunny areas. They are the classic mandevilla.

- The Pretty group, which comes in Pink, Crimson and new colors, Deep Pink and Deep Red, offers superior branching and vigorous growth. It can be grown in 4- and 6-inch pots. Flower size is the same as the Original group but foliage is glossy, thinner and more vining. Plants are natural climbers suitable for hanging baskets, patios and balconies.
- The Garden group begins with Garden Crim-

son. These plants are uniquely positioned for quart pots and will finish in 14 weeks. Plant in masses in beds, containers and baskets. No trellises are needed for support.

General Culture

Mandevillas are long-day plants. Buds are initiated with 10-11 hour days for the Pretty type and the Originals. The Giant group will flower with 12-hour days. Varieties in each group vary depending on the color. Ideal growing temperature is 65-75°F the first two to three weeks after potting. Keep plants on the dry side to encourage roots to grow out of the plug quickly. Temperature can then be lowered to 65-70°F. Lower temperatures can be used, but plants will take longer.

Initial potting should take place in a 4-to 5-inch pot.
Growing media should have a pH between 5.0 and 5.5.
Depending on the time of year, three to four weeks after potting, the leading

shoot will begin to grow quickly. The plant will then require a pinch to encourage a bushy habit. Two types of pinches can be carried out:

Method 1 – This type of pinch is a soft pinch, where you will leave at least four pairs of leaves and get fewer breaks and take these up for training. Pinching is done higher.

Method 2 – This method is for short, compact plants. Regular pinching is required once the desired height has been achieved. This will encourage a bushy

and dense plant for a nice finish and earlier sale.

Watering

Watering is critical and a dry regime is more suited than a wet one, where plants can become prone to root diseases. Too dry and there will be a problem with nutrient uptake. It is best to water lightly and often. The best way to control growth is with

Experience the Suntory Difference!

- Revolutionary genetics
- ✓ Widest range of colors and forms
- Superb disease resistance

Crimson, Giant Crimson,
Giant White and Giant Pink –
2012 Prairie Star Winners,
Kansas State University

Giant Crimson and Giant White – 2012 Best Vines, Dallas Arboretum

Pretty Deep Red – 2013 Favorite New Flowering Plant, TPIE

water retention, especially with the white-colored varieties.

Pests & Diseases

Monitor for whiteflies, western flower thrips, aphids, red spider mites, fungus gnats, shore flies and mealy bugs. Diseases to prevent are Botrytis, Phytophthora, Rhizoctonia, Fusarium, Cylindrocarpen (root rot), Cercospora (leaf spot) and Colletrotichum (leaf spot). **



Helpful Hints from T. Jay Higgins

Sun Parasol offers the most variety of colors and types in mandevillas and the

Sun-Fire Nurseries, Sarasota, Florida

only true reds on the market. The Pretty varieties are the most unique because they combine dipladenia characteristics (smaller leaf and flower) with a mandevilla growth habit (aggressive climber). Sun Parasols have more disease and pest resistance than the traditional 'Alice Dupont' mandevilla, along with a variety of colors and types to choose from. The amount of blooms Sun Parasol produces gives a "wow" factor. Sun Parasol can be used in various pot sizes, baskets and as a combination. The Originals have a bush habit and are ideal for 1-3 gallon bushes and any size hanging basket. The Giants are the true mandevilla and ideal to be grown on a trellis or used in hanging baskets. The Pretties are the most unique and ideal for a trellis or hanging basket. They have smaller flowers, but more flowers, and are very aggressive climbers. The biggest tip with mandevilla is choosing the right soil mix and location. They like a well-draining soil mix. They love the sun but don't like to be wet. For the consumer: make sure you plant in a sunny location and not in a low spot or place where a gutter may drain. They can be kept in pots on the patio or planted into the ground.

Spring Production Guide

Summer Splash Nierembergias

ERSATILE, fast-grow-ing Summer Splash niermebergias are easy to care for and have many uses in the garden. They produce large and abundant flowers on dense foliage, perfect for patio pots, rock gardens and hanging baskets. In the landscape, Summer Splash thrives in full sun or partial shade, is very heat tolerant and blooms continuously from April through November. Flowers are almost paper looking in appearance, with a clear cup shape with very fine foliage.



General Culture

Summer Splash nierembergias are available in Light Blue and White. These varieties have a neat, mounding patio type habit. They reach a height of 10 to 15 inches with a spread of up to 24 inches.

Nierembergias are typically a long-day plant. Rooted liners should be potted as soon as possible into 4- and 6-inch pots. Use a well-drained peat/perlite mix and keep pH between 5.5 and 6.0. Crop temperatures at this stage should be 65-70°F during the day and 60-65°F at night. Do not overwater. Plants perform best when they are kept slightly dry, but avoid wilting.

The crop may require pinching to encourage the right habit and breaks to get a bushy and mounding habit. Pinching encourages branching. Chemical controls are not really necessary. Generally, one liner per 4-inch pot is recommended and a 6-inch pot will require two liners. Three liners are recommended for a 10-inch basket.

Crop Timing

- 4-inch pots six to eight weeks with one liner and two to three pinches
- 6-inch pots nine to 12 weeks with two liners and two to three pinches
- 10-inch baskets 14 to 16 weeks with three liners and four pinches

Pests & Diseases

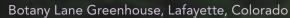
Key pests to monitor are thrips, mites and whiteflies. Powdery Mildew is the primary disease concern. ** Allan Says: Oh my, I can't say enough good things about these cup flowers. Brilliant colors, persistent in the ground (perennials for us) and long flowering time, they are simply winners.

– Dr. Allan Armitage





Helpful Hints from Aaron McDonald



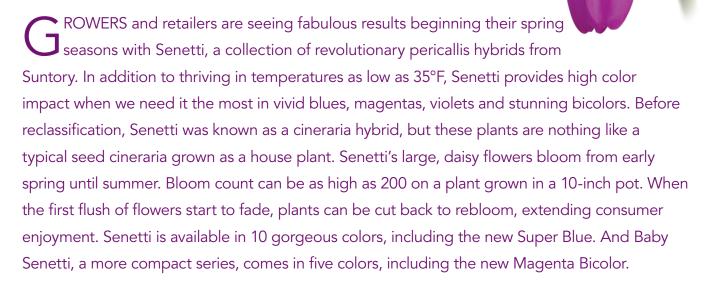


Summer Splash nierembergias are a great addition to any planter. They will not take over other material, but instead grow nicely to complement the other plants. When growing Summer Splash, it is best to keep it on the drier side, as it has a fine root system that can dampen off if kept too wet in the beginning. Plants also like a higher light intensity, as well as good air movement to keep them dry. A pinch once rooted will go a long way with helping to fill out the container. Once Summer Splash is well established, it will thrive all summer long with lots of blooms.





Senetti Pericallis





General Culture

Use a peat/perlite mix and keep pH at 5.6. Ideal production conditions are cool and airy, 35-40°F. Cool temperatures will produce a tough, toned finished plant with very little problems related to pests or diseases. Ventilation should be used when temperatures reach 48-50°F and humidity should be kept low.

Senetti is a day-neutral plant. In periods of long days and high light, shade will be required at a level of 40% over the crop. This is likely at the time of spring crop maturity or in early fall when plants are newly potted. Light levels of 5,000-6,000 footcandles are ideal.

Watering

Use a drip system or ebb-and-flood system and ensure the floor remains dry to keep humidity low. If overhead watering is necessary, water early in the day and on bright days. Keep the foliage as

dry as possible. Senetti has a large, vigorous root system and will require large volume of water regularly as the crop matures.

Feeding

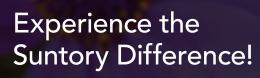
After the initial transplant, provide Senetti with a strong application of 250 ppm nitrogen with 20-10-20 during the first four weeks of production. Senetti is also a heavy iron feeder, so keep soil pH between 5.5 and 6.0 with a monthly drench of STEM from Peter's Excel for additional micronutrients. Senetti's vigorous root system will require a lot of water on bright and warm days. This should be done with clear water only. Three weeks prior to sale, switch to a phosphorous fertilizer (10-30-20) to support flower production.

Plant Growth Regulators

Senetti is very responsive to B-Nine (daminozide), which can be used at 2,000 ppm every 14 days, depending on the crop timing. Florel (ethephon) can also be used at the rooting stage to promote lateral shoots. If our rooted liners do not come as pinched and breaking plants, do a single pinch. Plants will naturally break and produce well-shaped plants.

Pests & Diseases

Aphids are the number one pest for this crop, but spider mites and whiteflies can also be present during production. Scout for thrips as flowers develop. Powdery mildew can be an issue during the cool crop production, so keep humidity levels low in the greenhouse. A preventive drench with Subdue MAXX and Cleary's every eight weeks will prevent root rot. **



- Unmatched early season color
- Unique reblooming ability
- ✓ Thrives in cool conditions



Helpful Hints from Chris Spanton

Sutton Consumer Products, United Kingdom

Senetti has strong bright colors consumers love, especially as we come out of winter into spring. For the grower, it can be grown cold and will command a high price at wholesale and retail. Don't be tempted to sell it cheap. It must be sold in bloom and minimum of 20+ flowers, so consumers can see the "wow" factor. Don't grow it in 4-inch pots. You need at least 6 to 8-inch pots to give the wow factor and get the price it deserves.

Senetti can be programmed to flower under short or long days. Pot it before Christmas and it can be grown cold in the greenhouse with pansy and primrose. Grown at 35-40°F, the crop would flower naturally in late March. It is temperature responsive. If you grow Senetti at 50-60°F, it will finish 3-4 weeks earlier, but you will need more plant growth regulators (PGRs) to control the growth. Use B-Nine right up until the crop starts showing color, otherwise the crop will get too tall. Allow air through the crop to prevent insects and diseases. The more space you give Senetti and the bigger the pot, the more it will grow to fill the container size. You can get away with one plant in an 8-10 inch container with the potential to carry up to 200 flowers at one time. Senetti is very self-branching and only requires one pinch as a plant, either as a liner or in the final pot.

As an added bonus, Senetti has the ability to rebloom. Just cut the plant back 50 percent in height after flowering, and in 4-6 weeks, it will be in flower again, provided it is well fed. As a crop it is an iron lover, so supplement feeds with iron regularly. Otherwise, magnesium deficiencies will show late in the crop, as demand for feed will be high as it comes into flower with the warmer growing conditions.

Top 3 Surfinia Varieties

- 1 Sky Blue
- 2 Red
- 3 Patio Yellow

Tips for Producing Surfinia Petunias

EARLY 25 years ago, Suntory made a splash with Surfinia, the very first vegetative petunia series. Not only did Surfinia reinvent the petunia category, it paved the way for the vegetative annuals revolution! Surfinia petunias are No. 1 in Europe, where brilliant cascades fall from window boxes everywhere. The trailing types span nearly 20 colors. Exciting introductions include Heavenly Blue abd Purple Majesty, which represent the next generation of Surfinia breeding - creating the perfect marriage of color, habit and performance. Surfinia Variegated Baby Purple offers the best performance in a variegated type. Mounding varieties include Patio and Baby Compact varieties, which are perfect for patio pots. The most compact series is Surfinia Bouquet with colors that outshine the competition in landscape trials. The new Surfinia Summer Doubles captured a lot of attention in trials this past summer for their heat and rain tolerance. Surfinia remains the brand for the world's best petunias!



Helpful Hints from Chris Spanton

Sutton Consumer Products, United Kingdom

Twenty years ago, Surfinia was well on its way to becoming a household name with gardening consumers in Europe as it revolutionized the hanging basket market by providing such good value for the money. Across central Europe, it took the place of ivy geraniums on balconies in Austria, Switzerland and Germany, whereas before no other plant tolerated the extreme conditions of summer heat and heavy rain. It just looked fantastic hanging down in window boxes and baskets and it went on and on performing. Surfinia's weather tolerance to the English cool summers was fantastic. The plant's ability to flower back up the stems was another

General Culture

Rooted cuttings should be potted as soon as possible into 4-inch to 6-inch pots. One liner per pot is recommended, using a well-drained peat/perlite mix with a pH between 5.5 and 5.8. Crop temperatures at this stage should be 55-60°F. Watering is key, as overwatering will lead to root rot. A little-and-often regime is encouraged when plants are very young. Surfinias are heavy feeders and the use of slow-release fertilizer is recommended as they grow in addition to liquid fertilizer.

Surfinia will require pinching to encourage the right habit and breaks to get a bushy and spreading plant. This should be carried out two weeks after potting. Surfinia is responsive to daminozide (B-Nine), which can be sprayed at a rate of 2,500-5,000 ppm. A Bonzi drench can be applied at 1-3 ppm. Apply as needed. Surfinia grows rapidly in conditions of high light and high heat.

Crop Timing

- 4-inch pots four to six weeks from one liner with one pinch
- 6-inch pots seven to eight weeks from one liner with two pinches
- 10-inch baskets 10 to 12 weeks with three liners and two to three pinches **

great strength, along with resistance to mildew. A lot of seed-raised petunias at that time would be done for by late August. There also is no need for consumers to dead head the flowers. Surfinia is self cleaning.

For the propagators, Surfinia is a dream to root – 3-4 weeks max on a bench. It responds to plant growth regulators (PGRs), especially B-Nine. Its branching habit makes an excellent 4-inch pot with a quick turn on the bench. It can be flowered easily in the pot and kept compact with PGRs or a dry regime. Keep plants cool and pinch the crop only once as a plug or in a 4-inch pot. Feed well throughout its entire life. Ensure they get plenty of fertilizer in final containers. Always use a slow-release product, such as Osmocote, in addition to liquid feed. They just can't get enough! For larger containers and baskets, plant liners in odd numbers – three or five. For combinations, mix with mounding Million Bells calibrachoas, Desana ipomoeas or Temari verbenas.

Experience the Suntory Difference!

- Extremely fast growing
- ✓ Outstanding garden performance
- ✓ Blooms profusely all season

Surfinia Deep Red, Baby Deep Purple, Wild Plum, Bouquet Denim and Rose Veined – 2012 Top Performing Plants, The Ohio State University

Surfinia Wild Plum, Blue Veined and White improved – 2012 Prairie Star Winners, Kansas State University

Surfinia Bouquet Denim –
2012 Best of Species, Penn State University





OMPACT Sunrosa roses are →ideal for small to medium landscape spaces and patio containers. Plants have an upright, bushy habit, but only reach a height of 15-24 inches with a spread of 12-18 inches. Sunrosa roses need less pruning and are easy to care for. 'Sunrosa Red' and 'Sunrosa Yellow' received perfect scores for foliage quality in the University of Georgia's trials assessing disease resistance. Plants are covered with blooms that are 1.5-2 inches in diameter. Colors include Red, Soft Pink and Yellow.

General Culture

Transplant plugs into a 2-gallon pots filled with well-drained soil. Water at the base of the cutting and keep the foliage dry. For best results, keep plants well-trimmed, starting about 4-6 weeks after transplant. Maintain good air circulation throughout the production area.

Watering

Maintain a good watering routine but do not leave the plants in standing water.

Lighting

Grow Sunrosa in full sun for best results.

Crop Timing

From potting to finish is about 12-16 weeks, depending on culture, growing zone and season.

Temperature

Optimum temperatures are 55-65°F at night and 70-80°F days.



Feeding

Fertilize plants when potted and maintain an ongoing fertilizer program for roses.

Growth Regulators

No growth regulator is needed. Sunrosa is naturally compact.

Pests & Diseases

In trials, Sunrosa varieties have been resistant to mildew, downy mildew and blackspot. Monitoring for possible pests and diseases is recommended. **





"I was taken with Sunrosa's retail friendly size and wanted to evaluate leaf health and flower power in the very challenging

heat and humidity of Athens, Georgia.

'Sunrosa Red' was glorious, and even though considerably smaller than all the roses we were grading, plants more than held their own."

– Dr. Allan Armitage



Tips for Producing

Surdiva Scaevolas



Suntory has transformed one of the most heat-tolerant bedding plants by making scaevolas more manageable to grow and maintain. Native to Australia and Polynesia, scaevola is grown as an annual but is a perennial by nature. While the native species has a wild, rangy habit, Surdivas have a mounding, semi-trailing habit, producing distinctive fan-shaped flowers on short terminal spikes. The three colors – Blue, Light Blue and White – are very uniform and fill out containers nicely. Plants are drought tolerant, making them ideal for low-maintenance situations. Surdiva scaevolas are capturing attention and recognition at leading university trials.

General Culture

Rooted cuttings should be planted as soon as possible into 4-inch pots or larger. Use a well-drained peat/perlite mix with a pH of 5.6-6.0 and maintain a substrate EC of 2.0. Slow-release fertilizer is recommended in addition to liquid fertilizer with a longevity of three to four months. Water plants prior to wilting and allow substrate to dry out between waterings to reduce the risk of root rot.

Extra iron applications may be required to promote good leaf color. Apply as

iron sulphate drenches (avoid foliage contact) or iron chelate sprays or drenches. Purpling of the foliage can be a result of low phosphorous and is more prevalent in some colors. Moderate or high levels of phosphorous can cause yellow-red coloring in older foliage.

Plant Growth Regulators

The use of growth regulators on this crop is not necessary. Pinching can encourage the correct shape and act as a form of growth control. B-Nine (paclobutrazol) drench and Sumagic (uniconazole) work well on scaevola.

Crop Timing

- 4-inch pots six to seven weeks with one liner and one pinch
- 6-inch pots seven to eight weeks with one liner and two pinches
- 10-inch baskets 12-15 weeks with three liners and two to three pinches. Less pinching is required when plants are grown cool.

Pests & Diseases

Monitor for whiteflies, thrips, leaf miners, aphids and mites. Prevent Botrytis, Phytophthora, Rhizoctonia and Pythium. A broad-spectrum fungicide drench is recommended after planting.

Allan Says: Among the finest scaevolas in our trial gardens, they associate well with other plants in the ground but are especially useful for mixed containers.

Light Blue is one of my favorites. - Dr. Allan Armitage

Helpful Hints from John Barone

Barone Gardens Cicero, New York

Surdiva scaevolas are much more compact than others on the market and are excellent for 4-inch production, window boxes and baskets. They are easy to grow and excellent in combination plantings. Growers used to have to rely on a lot of pinching to keep scaevolas in check with their rangy habits, but the Surdiva series solves this problem and offers three key colors - Blue, Light Blue and White. We've mixed Surdivas with Suntory's 'Silver Leaf Yellow' chrysocephalum and produced striking combinations of blue and yellow.

Experience the Suntory Difference!

- ✓ Most compact and branching
- Exceptional heat tolerance
- ✓ Easy to grow and maintain

Surdiva Light Blue – 2012 Prairie Star Winner, Kansas State University 2011 Classic City Award, University of Georgia

Surdiva Blue –
2011 Top Performer, Dallas Arboretum

Surdiva series – 2011 Best Scaevolas, Penn State University





Tips for Producing Ilumina Scoparia

General Culture

Production is suited to spring, as plants love full sun, high light and can withstand high temperatures as plants mature in the summer. Rooted cuttings should be potted as soon as possible into 4-inch pots, using a well-drained peat/perlite mix with a pH between 6.0 and 6.5. Temperatures of the crop at this stage should be 66-72°F for the first couple weeks as roots develop. Then maintain temperatures of 65-75°F during the day and 55-60°F at night. Maintain high light levels to reduce stretching.

Water plants prior to wilting and allow the substrate to dry out between waterings to prevent root rot. Use a balanced liquid fertilizer supplemented by slow-release fertilizer.

Ilumina will not require a pinch if the rooted plug or liner has received one during the plug production process. The use of plant growth regulators is not necessary, but scoparia does respond well to daminozide. Plants are naturally free-branching and low growing.

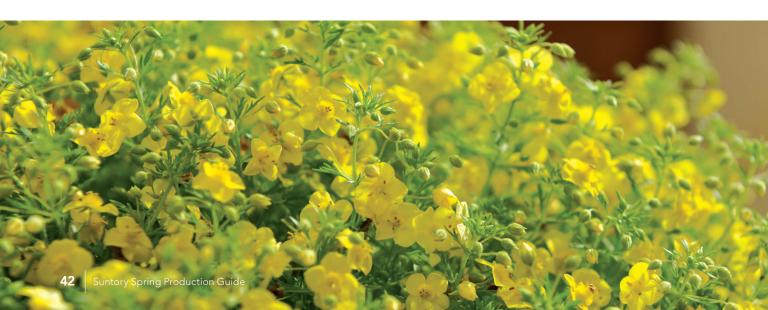
elightfully yellow and fragrant, scoparia 'Ilumina Lemon Mist Improved' produces an abundance of dainty, star-shaped blooms throughout the season from April through November. Scoparia is native to South America. Its sweet fragrance is an added bonus to stunning summer performance. Ilumina can be planted in pots, hanging baskets, window boxes and landscapes as a border plant. It's also a much-needed contrasting yellow for combination plantings. Foliage is delicate and fine, allowing free air movement through it.

Crop Timing

- 4-inch pots eight to 10 weeks with one liner and no pinching
- 6-inch pots 10-12 weeks with two liners and two pinches
- 10-inch baskets 14-18 weeks with one liner and two to three pinches

Pests & Diseases

Monitor plants for whiteflies, thrips and red spider mites. Prevent Botrytis, Powdery Mildew, Phytophthora and Pythium. Use a broad-spectrum fungicide drench after planting. **





Spring Production Guide









Tips for Producing

Summer Wave Torenias

Summer Wave was the first vegetatively propagated torenia series, thriving in summer heat when seed varieties would wilt. With a lush, trailing habit and vigorous growth, Summer Waves are perfect for shady beds or hanging baskets. Self-cleaning and well-branching, they require very little maintenance. While the trailing series has five colors in shades of blue and purple, including the distinctive Large Silver, the Summer Wave Bouquet series is capturing attention for early flowering, unique colors, high flower count and compact habit. In addition to Blue and Deep Blue, colors include Gold, Cream Yellow, White and Deep Rose. These compact plants still have the same Summer Wave garden vigor.

General Culture

Torenias are day neutral but tend to flower more rapidly under warm temperatures and the long days of spring. Rooted cuttings should be potted up as soon as possible, ideally in 4-inch pots. Use a well-drained peat/perlite mix with a pH of 6.0-6.5. Keep light levels moderate to low. Maintain moderately moist soil and water with a constant feed of 200 ppm water-soluble fertilizer. Keep temperatures at 70-75°F during the day and 60°F at night.

Plant Growth Regulators

Plants respond well to B-Nine (dami-

nozide) sprays at 1,500-2,500 ppm 15-20 days after sticking cuttings. Or spray with Sumagic, 10-15 ppm, as needed.

Crop Timing

- 4-inch pots four to six weeks with one liner and two pinches
- 6-inch pots six to eight weeks with one liner and three pinches
- 10-inch baskets 10-12 weeks with three liners and no pinching

Pests & Diseases

Monitor for mites and aphids. Prevent Botrytis on finished flowers and foliage. **

Allan Says: Torenias are necessary plants to fill out a container and basket program. The selection of colors of the

Summer Waves and their performance under challenging conditions has allowed me to recommend them whenever I speak.

– Dr. Allan Armitage







Top 3 Tapien Varieties

- 1 Blue Violet
- 2 Pink
- 3 Pure White

Tips for Producing

Tapien and Temari Verbenas

Suntory created a revolution when it introduced the Tapien and Temari verbenas, the first two major series of vegetatively propagated verbenas. The Tapien series is a groundcover type that produces a carpet of blooms with fine foliage from April through November. Vigorous plants are versatile for pots, baskets, window boxes and landscapes. Tapiens continue to be refined and are available in six colors: Blue-Violet, Lilac, Pink, Pink Improved, Purple and Salmon. Soon after Tapien came Suntory's Temari series, which became the model for large-flowered verbenas in even more colors, including Burgundy, Magenta and Cherry Red. Temaris are available in seven trailing colors and five patio types with a mounding habit that is more upright.

General Culture

Verbenas are day neutral but tend to flower more rapidly under warm temperatures and the long days of spring. Rooted cuttings should be potted up as soon as possible. Use a well-drained peat/perlite mix with a pH of 5.5-6.2. Water with a constant feed of 200 ppm with a complete water-soluble fertilizer. The crop is best kept on the dry side to aid root development.

Verbenas prefer cool temperatures and high light levels, which reduce stretching. Grow plants at 60-75°F during the day and 60-72°F at night.

Plant Growth Regulators

One hot new novelty is Candy Stripe, a striking bicolor in the trailing group.

The use of plant growth regulators is very successful in plug production because verbenas will stretch quickly in propagation. B-Nine (daminozide) is most effective for growth control. Apply sprays of

1,500-2,500 ppm 15-20 days after sticking. Florel can be used at rates of 300-500 ppm to encourage auxiliary shoots and stop stem elongation. Sumagic can be applied at 5-10 ppm as needed.

Crop Timing

- 4-inch pots four to six weeks with one liner and one or two pinches
- 6-inch pots seven to 10 weeks

Top 3 Temari Varieties Patio Blue **Bright Pink** 3 Patio Red Imp



Allan Says: Just great plants, with great colors and exceptional performance. - Dr. Allan Armitage

with one liner and two or three pinches

• 10-inch baskets – 12-16 weeks with three liners

Pests & Diseases

Monitor for whiteflies, aphids, thrips, leaf miners, mites, snails and slugs. The primary disease to prevent is Powdery Mildew. Also take measures to prevent Botrytis, Thielaviopsis, Phytophthora and Pythium. **

Experience the Suntory Difference!

- ✓ Fast growing
- Mildew resistant
- Cold and heat tolerant

Temari Patio Hot Pink, Patio Blue, Blue and Cherry Red – 2012 Prairie Star Winners, Kansas State University

Temari Patio Blue – 2011 Top Winner, Michigan State University

Tapien Salmon – 2011 Best of Verbena, Colorado State University



Helpful Hints from Danny Takao

Takao Nursery, Fresno, California

The Tapiens and Temaris set the standard for all verbenas. 'Tapien Blue Violet' is probably the number one verbena in the California market. With low disease issues, Tapien verbenas have become the mainstay in the landscape and in warmer areas continue to flower throughout the year. The best presentation for verbenas is in 4-inch, quarts and gallons. Temaris are well-suited to combos or hanging baskets with their more vigorous growth habit. Plant one liner per 4-inch through gallon-size pots. For combos or baskets, depending on the size and desired effect, plant one to three liners.



- Yellow
- 2 Orange
- 3 Cobalt Blue

Violas Tips for Producing Violas

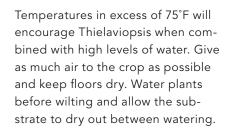
General Culture

Produce Violina as an early spring or early fall crop. Violina is day length neutral and does not require supplemental lighting to flower, but it will produce better quality and more flowers with increased light. Use a well-drained peat/perlite mix with a pH between 5.4 and 5.8 to reduce the risk of Thielaviopsis (black root rot). Crop temperatures at this stage should be 60-66°F for the first couple of weeks to aid root development. Do not over water.

After two weeks, the crop is best grown as cool as possible. Maintain day temperatures of 65-75°F during the day and 45-55°F at night.

ative of the Pyrenees mountains, Suntory's Violina violas provide a graceful, alpine look with a vigorous, trailing habit and hundreds of blooms with a slight fragrance. Unlike seed violas, Violinas offer the best of both worlds – winter hardiness and summer heat tolerance. In shades of yellow, orange, pink and blue, Violinas are a great choice for sunny or cool color schemes in hanging baskets, window boxes and patio pots. Try mixing with Surfinia petunias and Temari verbenas. Plants reach a height of 6 to 8 inches with a spread of 12 to 14 inches, allowing them to gracefully spill over edges. Plants are self-cleaning and bloom continuously.









Plant Growth Regulators

Plants are responsive to daminozide, paclobutrazol and uniconazole. Try a combination of chlormequat (Cycocel) and daminozide (B-Nine) as a drench that's 2,000 ppm B-Nine and 1,000-1,500 Cycocel. All of these regulators will keep the crop from stretching, which happens easily in high temperatures. Violina is very vigorous. The use of zero or negative DIF (difference between day and night temperatures) has proven to be a successful strategy, too.

Crop Timing

- 4-inch pots seven to eight weeks with one liner
- 10-inch baskets 14-16 weeks with three liners

Pests & Diseases

Monitor for aphids, fungus gnats, shore flies, thrips, whiteflies, mites, leaf miners, snails and slugs. A broadspectrum fungicide drench is recommended to prevent Botrytis, Thielaviopsis and Pythium.



Digital tools for production and marketing

YESS Is Your Electronic Toolbox! Find it Fast:

- Go to the Suntory Collection website: suntorycollection.com
- 2 Enter the site as a Pro Grower or Gardener
- Click on the Your Easy Suntory Solution button under the navigation bar.
- 4 Explore all the YESS resources

Gardening Tips

New Apps for iPads!



Grower's Guide

Complete cultural information for the entire Suntory catalog! Also includes video library and links to YESS! resources.



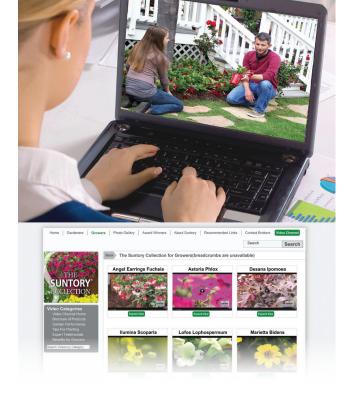
Easy Gardening Tips – Revealed by the breeder

Suntory has an interactive digital publication for consumers that's fun, inspirational and most of all, useful. Special features include the searchable Flower Finder and the ability to choose flowers by color.

Virtual Combo _____ Designer

Design combinations before you plant!





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