

EDITOR'S NOTE

Happy New Year! By now you are well into the swing of spring and I hope your season will be a prosperous one. The country has faced more than its share of challenges in the past year and our industry has, too. Conferences have been cancelled, some businesses have shut their doors and "cautious optimism" is the attitude held by many. We at Ecke and The Flower Fields have faced our own challenges and are enthusiastically marching into spring with plant materials for you that out-wave the competition!

Our feature article on Stained Glassworks Coleus points out the tips needed to make a fast, warm crop even easier! If you have not made plans to introduce even more of these vibrant sellers to your landscaping and home gardening customers, you may be missing the money boat! And, speaking of money, I was astounded to learn the number of tests that we send out for testing each year to ensure that you have cuttings from clean stock. Check out the Technical Q and A for more details on New Guinea Impatiens.

Every year, growers face the need to add or adjust orders that were not anticipated. Rest assured that we at Ecke and The Flower Fields will do everything in our power to fill those orders to your satisfaction. We occasionally experience availabilities that were unanticipated at the start of the season. Work with us or through your broker to fill your needs.

Again, on behalf of The Flower Fields and Paul Ecke Ranch, I wish you a prosperous season!

Shannen Ferry,
Editor
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See us at the Spring Trials
April 8-17, 2002

Contact Us:

If you would like to contact us with feedback or if you need technical assistance please call us at 1-800-468-3253.

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What More Can We Say About Coleus? Lots!

Coleus is a hot topic in the consumer garden press. And, while demand grows at retail, The Flower Fields® is making it easier than ever for you to grow a full range of gorgeous new coleus varieties. Stained Glassworks™ Coleus represent the newest generation of high performance vegetative annuals. They are easy to grow. They come in a wild array of colors. They thrive in full sun as well as shade. They make a fantastic massed display and are regal enough to stand alone as a focal point.

Although Coleus is the common name, *Solenostemon scutellarioides* is now the scientific name. Wise growers are buying clean stock cuttings like the Stained Glassworks series from The Flower Fields®. Clean stock cuttings have been virus indexed and are pathogen and nematode free providing for greater ease and uniformity in production as well as improved vigor. Current landscape cultivars (DaDa Daddy, Touch of Class, Oompah, Golden Bedder, South of the Border, Zebra, Molten Lava) have large, full leaves with a wide range of color patterns. Novelty cultivars (Tilt A Whirl, Garden Walk, Fright Night, Kiwi Fern, Dragon's Claw) have unique foliage shapes accentuated by eye-catching color patterns.

Other reasons growers are turning to Stained Glassworks Coleus is improved customer satisfaction resulting from their adaptability to full-sun locations and their reluctance to flower until late in the season. These coleus can be grown in many different container sizes, increasing their appeal to a wide range of retailers and consumers. Retailers should be encouraged to maintain display containers of Stained Glassworks coleus in prominent locations to spur the sales of these vibrant plants. Combination planters, for example or for sale, will show customers the variety of options available to them.

Production

Growers can maximize production and minimize crop time by following a few key practices. Stained Glassworks Coleus are easy to root and can be grown with most other warm-season bedding plants. Coleus do not like cold temperature production and are best timed for sales after Mother's Day in most parts of North America.

Stained Glassworks Coleus are available as unrooted or rooted cuttings. Unrooted cuttings are best grown with one plant per cell or root cube. Cuttings will root within 3-4 weeks under standard propagation conditions using

mist and temperatures of 68-70°F, but bottom heat of 70-72°F will promote quicker root development. Some growers prefer to stick cuttings into the final container. Bottom heat and careful soil moisture management are necessary when rooting in larger containers to avoid cold, soggy soil that can delay or lengthen rooting time.

Rooted cuttings, planted into their sales container can be timed according to the table below. Growers who optimize bottom heat,

Container Size	4" - 6" Pot	One Gallon	10" - 12" Hanging Basket
Number of Cuttings	1	2 - 3	3 - 4
Crop Time (weeks)	3 - 5	4 - 6	4 - 6
Average Temp. (°F)	65 - 70		
PGR	Possibly	Possibly	Yes
Pinch	Yes – two weeks after potting		
2 nd Pinch	No	Optional	Optional

temperature control and media management can expect to reduce the time needed to produce the crops as outlined.

Cultural Requirements

Media should be pasteurized, well-drained and soilless. Avoid dense soils for rooting but provide good water-holding capacity for best consumer and post-production performance. Optimum pH ranges between 5.5 and 6.3.

Monitor irrigation practices to keep uniform but not excessive moisture during production. Running plants "a little on the dry side" will encourage strong root systems and reduce stretch. Thorough watering is still essential for strong roots, so slightly lengthen the interval between irrigations to avoid soluble salts buildup and match watering frequency to the light levels during growth. Fertilize with a complete general purpose or peat-lite fertilizer that complements your water quality. For most growers, a constant liquid feed (CLF) regime of 150 – 200 ppm N from 20-10-20, 17-4-17, 15-5-15 or similar fertilizer is optimum. Using a low rate of Osmocote® or other controlled-release fertilizer will allow you to reduce your CLF program to approximately 75–100 ppm N. It will also provide improved performance to your end user. Be sure to monitor your media soluble salts levels and keep it between 1.5 and 2.0 mS/cm (mmhos/cm) as measured by saturated media extract. Make clear water applications if soluble salts accumulate.

Some degree of height control can be gained through fertility management and this is used to advantage by astute growers. Lower phosphorus levels with adequate nitrogen levels can aid in reducing stretch. Judicious use of fertilizers with higher levels of ammo-

num nitrogen (40% or more of the N is ammonium plus urea) when bright warm weather is assured, will encourage leaf expansion or faster production. Do not combine this practice with higher levels of phosphorus as this will cause longer internodes and rangy growth.

Temperatures should average 65°F to establish the crop. Once roots are well developed, grow on at 70-85°F day temperatures and 55-65°F nights. Stained Glassworks Coleus should not be grown cold. Good air circulation is essential and humidity should be maintained between 60 and 90%. Remember to lower the humidity if temperatures are lower.

Light levels no longer need to be low during production. Stained Glassworks vegetative coleus grow well at high light intensities of 4000-6000 foot-candles. More intense foliage color variations will develop under shadier conditions of 1,500 to 3000 foot candles and plants may exhibit slightly different growth habit as well. As mentioned above, be sure to match irrigation to light levels to avoid excessive drying since bottom leaves may not recover after a significant wilt.

Pinch two weeks after planting to encourage branching. A second pinch may be made later in production to shape the plant, create a full plant habit and control height.

Plant growth regulators (PGRs) may not be necessary on 4" pots or smaller if growers can control height via irrigation and pinching while timing the crop. Molten Lava is one example of a very vigorous cultivar that may need chemical PGRs. Bonzi® B-Nine® and A-Rest® have been successfully used in 6" or larger containers, but caution should be exercised and PGR applications trialed before a total crop application is made. Southern and Sunbelt growers typically use a greater application rate of PGRs than those in cooler northern climes. A negative DIF in the early hours of daylight will also aid in height control. Drop temperatures to 55°F at daybreak and hold for a couple of hours when possible.

Insects to be on the watch for are aphids, mealy bug and whiteflies and traditional methods of control may be applied according to label directions. Diseases to be aware of on coleus include *Botrytis*, *Alternaria* and *Pythium*. Strict sanitation measures and good air circulation are keys to prevention and control of these pathogens. Current pesticides and fungicides for Ecke's Flower Fields offerings, including Stained Glassworks Coleus are available from the website at www.ecke.com.

TECHNICAL Q & A

Help! I'm Seeing Spots!

Q I am seeing some spots on my New Guinea Impatiens. How can I visually tell the difference between virus symptoms and those leaf spots caused by fungi?

A Great question! The answer is – You can't tell them apart just by looking! Those concentric ring spots may be caused by either *Botrytis*, *Myrothecium* or one of the Tospoviruses (impatiens necrotic spot/INSV and tomato spotted wilt/TSWV). Especially in the moist environment during propagation and just after transplanting, the odds are you are experiencing a fungal problem. Advanced stages of both diseases may show mycelium growth and fruiting bodies on

the leaf spots. *Botrytis* and *Myrothecium* are ever-present in the greenhouse environment. Practice good sanitation, maintain good air flow and use preventive fungicide applications to minimize the establishment and spread of disease. Also, avoid keeping foliage wet for long periods of time.

The Flower Fields' NGI cuttings are from clean stock, propagated in facilities with insect screening. INSV and TSWV are spread

by thrips, primarily the Western Flower Thrips (WFT). We send off thousands of samples from our stock for virus checks every season and they consistently test negative for viruses. Prevent the establishment of thrips and Tospovirus by using sticky cards and appropriate control measures. Both the Tospoviruses and WFT have *Botrytis* spot on NGI

which vary from crop to crop. For example, symptoms on exacum look like bacterial diseases and on gloxinia they are similar to phytophthora. Remove weeds. They serve as reservoirs for both the thrips and viruses.

Tospovirus on NGI
Once leaf spots are detected, a sample of the affected tissue should be sent to your local diagnostic clinic for culture or virus testing, or send the sample to Agdia, Inc., for Tospovirus testing. Obtain forms and information online at www.agdia.com or call 1-219-264-2014. In the meantime, apply a fungicide for *Botrytis* and *Myrothecium* control. Heritage®, Daconil® and Mancozeb® are effective controls for both fungi. For more controls, refer to the Control Charts located on our website at www.ecke.com/html/h_fields/ff_techdoc_list.html.

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