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Cultural Guidelines for Commercial Production of Interiorscape Fire Flash (*Chlorophytum amaniense*)[1]

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Chlorophytum comosum

View Assessment

North, Central, South

High Invasion Risk

Predicted to be invasive and not recommended by IFAS. Will be reassessed every 10 years. In particular cases, this species may be considered for use under specific management practices that have been approved by the IFAS Invasive Plant Working Group.

'Fire Flash' (*Chlorophytum amaniense*) is a foliage plant introduced to Florida from Thailand in the late 1990s. Bright coral petioles and midveins contrast with deep green, ovate-lanceolate leaves making an exotic appearing and exciting new plant (Chen et al. 2002).

Like spider plant (*Chlorophytum comosum*), fire flash is a member of the family Liliaceae, but actually originates from the rainforests of East Africa in the Usambara Mountains of Tanzania. 'Fire Flash' is the only recognized cultivar in this species; other names have been given to it including 'Mandarin Plant' and 'Tangerine'. This article is intended to provide brief guidelines for propagation, production, and interior use of 'Fire Flash' and list common problems that may be encountered during production and interiorscape use.

Cultural Guides

1. **Propagation and potting mixes**

'Fire Flash' bears viable seeds, and uniform seedlings can be produced from seeds germinated in moistened potting mixes in shaded greenhouses with temperatures of 70 to 85°F. Tissue-cultured liners are also available. A liner consisting of a single plant is recommended for production in 6- or 8-inch pots.

Most commercial potting mixes that have 40 to 50% sphagnum peat with balanced volumes of pine bark and vermiculite should be adequate for 'Fire Flash' growth. Be sure that the soluble salts of the mixes are between 1 to 2 dS/m (1,000 to 2,000 µmhos/cm) and pH is between 6 to 7.

2. **Production**

'Fire Flash' should be grown under 90 to 95% shade or about 600 to 1,200 foot candles. Higher light levels will cause leaf chlorosis or scorching (Figure 1 and 2). Light intensity is extremely important for quality plant production.



Figure 1. Foliar color differences when 'Fire Flash' is exposed to high light levels (right side: 2,500 foot candles) and appropriate light levels (left side: 1,000 foot candles) levels.



Figure 2. 'Fire Flash' leaf chlorosis and necrosis caused by high light levels.

Keep the temperature in shade greenhouses or shadehouses between 65°F to 90°F. The best temperature range for growth is between 75°F to 85°F (Chen et al., 2005).

Media should be kept moist but not overwatered. Water quality is important because this plant may exhibit leaf necrosis and damage if irrigation water contains high concentrations of fluoride or sodium.

Do not use overhead fertigation because leaves are extremely sensitive to chemicals. A safe method of fertilizer application is to use a controlled-release fertilizer with N-P_2O_5-K_2O ratio of 3-1-2 or 2-1-2 at 5 to 6 grams per 6-inch pot or 7 to 8 grams per 8-inch pot and periodically check the soluble salt levels of the potting mixes using the pour-through method. If soluble salt readings are below 1.0 dS/m, add an additional amount of the controlled-release fertilizer at the above-mentioned rates.

Few disease and pest problems have been noticed on this plant. Unless absolutely necessary, do not spray chemicals, insecticides, bactericides, or fungicides on leaves to avoid any potential phytotoxicity. Always test chemicals on a few plants before spraying the entire crop.

Shipping and Interior Care

Since 'Fire Flash' is produced under heavy shade conditions, light acclimatization is not needed. Finished plants should be groomed and packed by inserting individual plants into sleeves and placing sleeved plants in appropriate boxes for shipping. The sleeve is necessary because the leaves of this plant are fragile. 'Fire Flash' should be transported in refrigerated carriers at a temperature of 60°F to 65°F for long-distance shipping. Chilling injury may occur if shipping temperature drops below 50°F for more than 12 hours.

Once arriving at their final destination after shipping, plants should be placed in interior light levels between 50 to 200 foot candles. Plants produced in 6-inch pots can be placed on office desks or table tops, but those in 8-inch pots are best used as floor plants. Occasional grooming of the plant is needed to remove senesced leaves and inflorescences that develop. Plants should not be fertilized unless soluble salt readings are below 1.0 dS/m. Media should be kept slightly moist in interior conditions. Temperatures of 68°F to 75°F are most appropriate. Our recent interior evaluations have shown that 'Fire Flash' can tolerate interior light levels as low as 50 foot candles for one year.

Physiological Problems

The most common problem encountered in 'Fire Flash' production is leaf chlorosis followed by necrosis (Fig. 2). Excessive light intensity, poor nutrient management, and/or chemical phytotoxicity cause this problem. Avoiding high production light intensity is the key; do not produce this plant under a light level higher than 1,200 foot candles.

In addition, if plants are not used for seed production, remove the inflorescence once it appears. Developing inflorescences will compete for nutrients, delay production time by about one month, and/or cause leaf chlorosis. Additionally, the dried up inflorescences will affect the overall appearance of the plant.

Occasionally, crowded, small-leaved, and multiple-shoot plants occur during production. These plants have little ornamental value and should be rogued. They originate from tissue culture liners that either clumped or have multiple shoots. The use of single-shoot liners will eliminate this problem.

Literature Cited

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Chen, J., McConnell, D.B., Henny, R.J., Everitt, K., and Caldwell, R.D. 2005. Fire Flash: An exotic tropical ornamental foliage plant. HortTechnology 15:686–689.

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