

## perennial solutions

# *Dryopteris erythrosora* 'Brilliance'

This showy autumn fern loves to be the center of attention. And its dazzling tricolor fronds provide season-long interest your customers won't be able to resist.

**T**he popularity of ferns continues to rise as homeowners, avid gardeners and landscapers add texture to their landscapes with various varieties. One of the showiest ferns is the autumn fern, *Dryopteris erythrosora*, which provides season-long interest with its delicate tricolor fronds.

*Dryopteris* 'Brilliance' is a new, more colorful autumn fern cultivar that produces a dazzling display of color for every season. The newly emerging fiddleheads start pink and turn a lustrous copper-orange as the fronds unfold. The newly emerging fronds seem to glow against the backdrop of glossy, dark-green mature fronds. As autumn approaches, the fronds return to a russet-orange coloration and will remain so throughout the winter months in much of the country (USDA Zones 7 and higher). 'Brilliance' is ever-

green in these zones and becomes deciduous in colder climates.

The genus name, *Dryopteris*, is derived from the Greek words *dryos* (oak) and *pterus* (fern) as it was found abundantly in oak forests. The species name, *erythrosora*, translates to "red sori" referring to the spore-bearing structures on the undersides of the leaflets.

Autumn ferns are widely grown in shady locations Zones 4 to 9. The best leaf coloration is obtained when they are grown in part sun. They perform well in locations with early-morning or evening sun; avoid locations with full sun in the middle of the day. They should be pampered somewhat during the first growing season; be sure to give them plenty of water, but once they are established, *dryopteris* are indifferent to heat, humidity and cold — not to mention deer proof. At maturity, 'Brilliance' reaches 18 to 24 inches tall and spreads 16 to

24 inches wide.

The maintenance-free foliage of *dryopteris* 'Brilliance' looks terrific every season of the year and is a fine choice for shady landscapes and perennial beds. Additionally, autumn ferns work well in containers or combination planters.

### Propagation

Commercially, *Dryopteris erythrosora* 'Brilliance' is propagated



By Paul Pilon



Left: A showy tricolor fern, *dryopteris* offers season-long interest. (Photo: Darwin Perennials). Right: *Dryopteris* 'Brilliance' and *heuchera* 'Marmalade' (Photo: Walters Gardens).

by tissue culture and is available to growers as established liners. Autumn ferns can also be propagated by clump division. It is best to divide ferns in early spring as they begin to emerge.

**Production**

Autumn ferns are commonly grown in quart to gallon-sized containers. 'Brilliance' performs best in growing mixes that have good water-holding characteristics, but

also allows adequate drainage. When transplanting, plant ferns even with the soil line of the liner they were previously grown in. Planting them too deeply will lead to crop variability and planting

them too high will cause the liners to dry out quickly; improper planting depths will not only affect crop quality and appearance but may also lead to plant mortality. Applying a preventive fungicide drench using Subdue MAXX or OHP 6672 after planting can help decrease problems associated with improper planting practices.

Pay particular attention to your watering practices when producing dryopteris; keep it moist the entire time you are growing them. Water stress, particularly at the beginning of the crop cycle, could prove detrimental to the crop. Inadequate moisture levels commonly cause the margins of the fronds to turn brown and crispy. Ferns also do not like to remain waterlogged or left in standing puddles of water; overly wet growing conditions could lead to root-rot pathogens. Water thoroughly when irrigation is required, and allow the growing mix to dry slightly between waterings.

Ferns are light feeders and require significantly fewer nutrients than most perennials. In fact, high salts may cause root injury, leading to potential problems with plant pathogens such as Pythium. Maintain pH between 5.5 and 6.5. Growers commonly deliver nutrients using either a constant liquid fertilization program, feeding at rates of 50- to 75-ppm nitrates, or a controlled-release fertilizer incorporated at a rate equivalent to ¾-pound of nitrogen per yard of growing medium. To prevent EC levels from building up, apply clear water every second or third irrigation where water-soluble fertilizers are used, and provide a 10 percent leach fraction with every irrigation where controlled-release fertilizers have been applied.

Compared to other fern species, 'Brilliance' can tolerate slightly higher light levels without the fronds scorching. To prevent the fronds from scorching during the summer months, produce dryopteris under at least 35 percent shade in the North and up to 50 percent shade in the South. Growers should filter out excessive light levels from the production area and maintain light levels of 2,000-3,000 foot-candles.

**Insects and Diseases**

'Brilliance' does not have many major insect or disease problems. Aphids, slugs, grasshoppers, Japanese beetles, thrips and whiteflies may occasionally be observed feeding on them, but they rarely

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become problematic. Botrytis is the most common foliar pathogen, and it can usually be prevented by providing adequate spacing and air circulation, and watering early in the day. As mentioned above, root pathogens may become problematic with extended periods of overly wet growing conditions or when the roots become damaged from high fertility levels. These insects and diseases can be detected with routine crop monitoring; control strategies may not be necessary unless the scouting activities indicate actions should be taken.



(Photo: Walters Gardens)

### Scheduling

'Brilliance' can easily be scheduled and produced for spring or summer sales. Small, quart-size containers will reach a marketable size in five to seven weeks when they are transplanted using 72-cell liners and grown at 65° F. Gallon containers can be grown in a similar manner but will take a few more weeks to size up (allow nine to 12 weeks).

Many growers transplant ferns in the summer before the year they are to be sold. If this is your preference, be sure to allow adequate time for bulking and establishment before the days get shorter and the temperature is too cool for good growth. In most of the country, it is recommended to plant ferns before Sept. 1 (earlier in cold climates). It will take autumn ferns seven to nine weeks to reach a marketable stage when they are forced at 65° F in the late winter or early spring.

### Availability

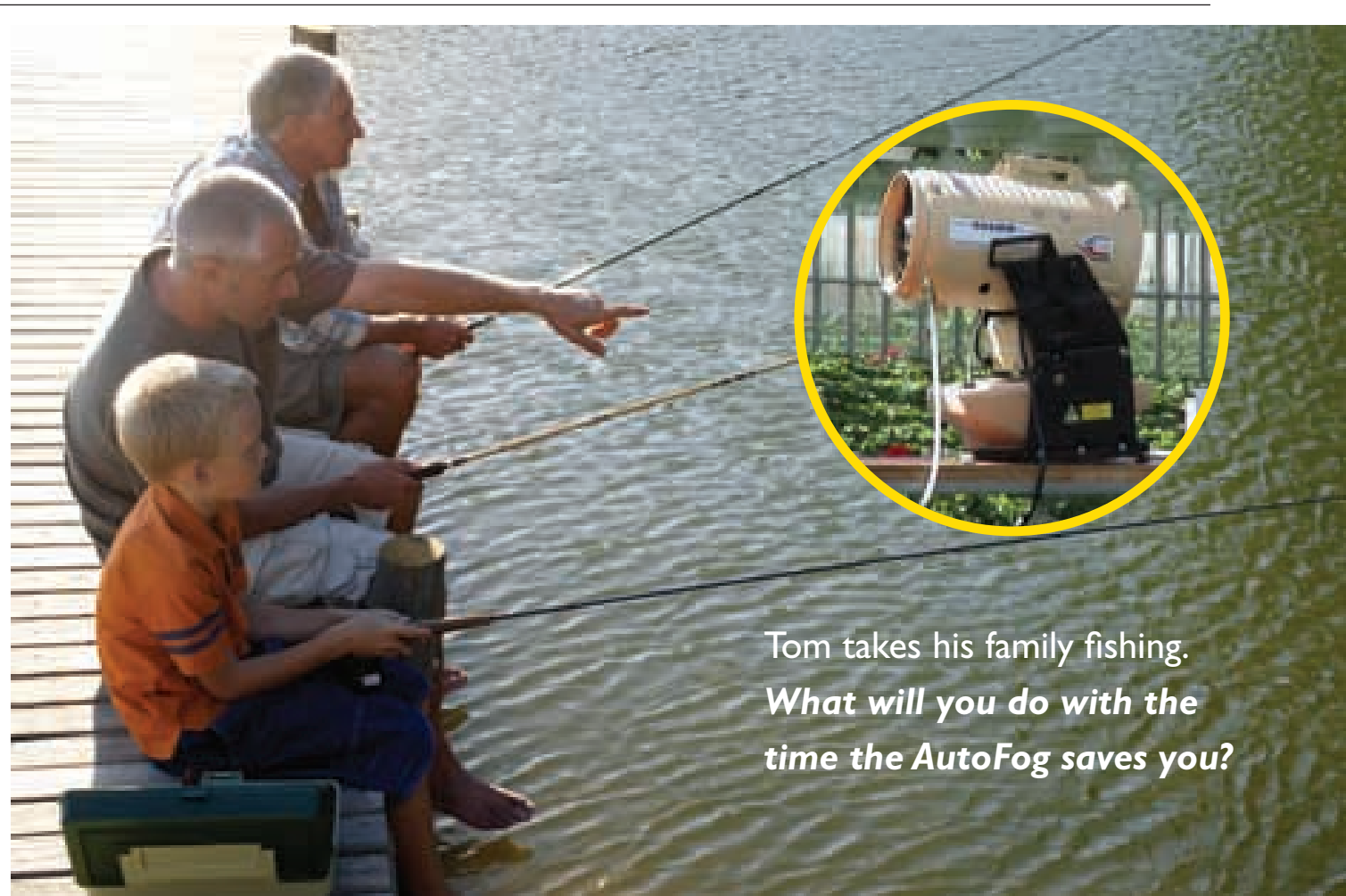
*Dryopteris erythrosora* 'Brilliance' is widely produced as both a plug liner and finished container. Rooted liners can be acquired from

Darwin Perennials ([www.darwinplants.com](http://www.darwinplants.com)), North Creek Nurseries ([www.northcreeknurseries.com](http://www.northcreeknurseries.com)), Walters Gardens Inc. ([www.waltersgardens.com](http://www.waltersgardens.com)) and other reputable plant suppliers.

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