

# FNGA ENDOWED RESEARCH FUND Project Enhancement Award - 1998

## Weed Control in Ornamental Plant Production Using Preemergence Herbicides

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**Introduction:** Weeding labor and production and quality losses due to weed competition are costly production factors that affect many ornamental plant producers. Herbicide manufacturers are not willing to spend a lot of money registering products for use on ornamental crops because the ornamental horticulture industry is such a minor market for herbicide sales and the tolerance for damage to ornamentals is almost nonexistent.

**Purpose:** This research was conducted in a continuing effort to generate phytosafety and efficacy data needed to expand herbicide labels for use on ornamental plants. Preemergence herbicides that have recently been introduced or that are in preparation to be introduced were evaluated for crop phytotoxicity and weed control effectiveness. Both acute and chronic phytotoxicity were monitored.

**Products evaluated:** dithiopyr (Dimension®), prodiamine (Factor®, RegalKade®) and thiazapyr (Visor®) and oxyfluorfen + pendimethalin (Ornamental Herbicide II).

**Crops used:** *Acer rubrum* (red maple), *Agapanthus africanus* (lily-of-the-Nile), *Asparagus densiflorus* 'Sprengeri Compacta' (compact sprengeri), *Camellia sasanqua* 'Bonanza', × *Cupressocyparis leylandii* (Leyland cypress), *Cycas revoluta* (king sago "palm"), *Galphimia glauca* 'Jungle Princess' (thryallis), *Gelsemium sempervirens* (Carolina yellow jasmine), *Illicium parviflorum* (Ocala anise), *Lantana camara* 'Gold Mound', *Loropetalum chinense* 'Ruby', *Myrtus communis* (common myrtle), *Ophiopogon jabarun* 'Vittata' (aztec grass), *Plumbago* 'Imperial Blue', *Quercus virginiana* (live oak), *Rhododendron* 'Formosa' (Formosa azalea), *Viburnum suspension* (sandankwa viburnum), *Zamia floridana* (coontie)

**Results:** Data are being analyzed and will be made available to growers, herbicide manufacturers, and pesticide registration agencies using reports, newsletters, the World Wide Web, and professional and trade journals.

**Value to the industry:** Weed control is a costly expense for Florida's ornamental horticulture industry.

The use of preemergence herbicides has been shown repeatedly to greatly reduce production costs. The data generated by this research will provide Florida's growers with additional factual information and herbicide registrations with which to combat weed problems.

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