



Florida Department of Transportation Research Techniques and Training for Management of Invasive Species and Vegetation on Florida Rights-of-Ways BDK75 977-11

Along with the thousands of structures, roadways, and pipelines which FDOT maintains, the Department also installs and maintains thousands of acres of turfgrass and other landscape plants. The plant materials that cover the shoulders of roads, culverts, swales, and medians complement and beautify transportation facilities. But plant materials are also integral to the technical design of roadways and drainage structures. Plant materials reinforce soil structures and prevent erosion due to wind and water. Turfgrasses aid in dust stabilization, noise abatement, and glare reduction, while also providing areas for rain water entrapment, ground water recharge, and entrapment and degradation of organic chemicals and pollutants.

The vegetation along Florida's roads and highways represents a significant investment, and as any other component of the transportation system, defining best practices ensures optimum technical performance at the minimum cost. With this in mind, the Florida Department of Transportation contracted with researchers at the University of Florida's Institute of Food and Agricultural Sciences to develop a manual that could serve as a resource and training guide covering all major aspects of maintaining turfgrass.

The first chapter of the manual covers turfgrass varieties, their visual and functional qualities, and selection for specific purposes. Other areas covered are other desirable plants and soil properties.

The second chapter focuses on installation and management. Under the heading "Turf Establishment", the manual presents information about site preparation, planting, and erosion control materials. This section also covers the cultural practices of mowing, fertilization, aeration, and pest management. Mowing has important implications for visibility and driver safety, and these points are covered in text and diagrams.

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Properly maintained roadside and median vegetation is an important part of maintaining the function and safety of Florida's highways.

A section of chapter two is devoted to weed management, which focuses on the safe and effective use of pesticides. This is a complex area with legal implications. The authors explain pesticide licenses, the Worker Protection Standard, and Personal Protective Equipment. They discuss proper pesticide storage, disposal, transport, mixing and loading. Another section is devoted to adjuvants.

The manual's third chapter is devoted to operator safety, including general safety procedures before and during mowing operations. Basic tractor safety issues, such as preventing overturns and backward flips, are presented. Special safety considerations for specific mower types are included.

The fourth chapter addresses equipment maintenance and offers maintenance checklists for a variety of equipment, including trailers, mowers, tractors, and vehicles up to one ton.

Throughout the manual, the authors provide references and links to additional materials. The text is accompanied by numerous helpful charts, graphs, and photographs.