

Fertilization:

Fertilization on the roadside shall be used to establish new sod or seed after soil testing to determine the type of fertilizer required. Any routine fertilization on existing turfgrass must be documented in a written plan supported by soil tests no less than every mile, and approved by FTE District Maintenance Engineer. All Department personnel applying fertilizers shall be trained through the Green Industry Best Management Practices (BMP) Program, register the training in Training Records, Evaluation and Scheduling Systems (TRESS), and retain a copy of the completion certificate on file, but are not required to be licensed commercial applicators.⁸ All contractors and/or permittee who contract the application of fertilizer shall ensure they are licensed commercial applicators who have been trained through the Green Industry BMP Program, and have obtained a limited certification for urban landscape commercial fertilizer application under section 482.1562, F.S. with a current copy of the license on file.⁹

Fertilizer is used to add essential nutrients to the soil to support the growth of the turfgrass. Improving the vigor and density of turfgrass through a sound, systematic program of fertilization produces an environment least favorable to undesirable vegetation. Proper fertilization is a primary determinant of turfgrass persistence and quality. It is also one of the least time consuming and least costly components of a complete turf management program and should be a primary tool in roadside vegetation management. Properly fertilized grass makes more efficient use of water. A thick turf with dense root system helps slow water movement and keeps it in the root zone. Grass which is properly fertilized develops a deep root system which is very important under roadside conditions.

Timing and Frequency of Application

The need for fertilizer depends on the turfgrass species. Certain species, such as Bahiagrass have relatively low requirements, while others like Bermudagrass grow best with higher rates of nutrients.

Newly seeded sites: For newly seeded sites, research has shown that fertilizer should be applied approximately five weeks after the seed has germinated. At this time, the seedlings have sprouted and a developed root system extensive enough to allow them to capture and utilize the nutrients from the fertilizer. Applying fertilizer during the seeding operation is inefficient because the plants do not have a sufficient root system capable of taking up the nutrients. Fertilizer applied during the seeding operation will have been leached from the soil or washed away in surface runoff. The application of fertilizer approximately five weeks after germination provides the nutrients necessary for continued vigorous plant growth. Take care not to apply excessive amounts of fertilizer. Excessive fertilization may cause chemical burning or overstimulation of top growth to the detriment of the rest of the plant.

Established turf: The application of fertilizer to areas of established turf should be based on an evaluation of the turf quality and should take place only when a need has been identified. The optimum conditions for the release of nitrogen are the same as those for plant growth. Lawn turf fertilization should be based on the turfgrass species being grown and the location within Florida. For an established turf, a fertilizer with a 1:0:1 ratio of nitrogen, phosphorus, and potassium (such as a 15-0-15 analysis) is generally recommended for once a year applications. Phosphorus should be added only if a soil test recommends doing so. Properly fertilized grass use water more efficiently. A thick turf and dense root system helps allow water movement and keeps it in the root zone. Grass which is adequately fertilized develops a deep root system, which is very important under roadside conditions.

⁸ Per the Florida Department of Transportation Topic 850-000-015-I, effective January 10, 2014

⁹ Per the Florida Department of Transportation Topic 850-000-015-I, effective January 10, 2014

Recommended Fertilizer Rates for Bahiagrass and Bermudagrass¹⁰

Species/Location	North Florida	Central Florida	South Florida
	N Recommendations lbs/1000 sf	N Recommendations lbs/1000 sf	N Recommendations lbs/1000 sf
Bahiagrass	1	1	1
Bermudagrass	2	3	4

Application Rates

The maximum amount of fertilizer that may safely be applied at any one site depends on the type of nitrogen carrier. In the past, it was customary to recommend the application of 1 pound of actual nitrogen per 1000 ft of turfgrass. Due to potential environmental concerns it is now recommended that no more than one half (0.5) pound of the nitrogen in the application is in a soluble (quick release) form. Therefore, to make an application of 1 pound of actual nitrogen per 1000 ft. of turfgrass you would need to use a blended fertilizer product containing no more than 50% of total N in soluble form with the rest of the nitrogen originating from a slow-release N source.

Recommended Fertilizer Application Schedule¹¹

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
North Florida												
Bahiagrass				X								
Bermudagrass				X					X			
Central Florida												
Bahiagrass			X									
Bermudagrass			X		X				X			
South Florida												
Bahiagrass		X								X		
Bermudagrass		X		X			X			X		

All applications of fertilizers on the state right of way shall be documented using form 850-000-26

¹⁰ from FDOT Maintenance Handbook "A Guide for Roadside Vegetation Management"

¹¹ from FDOT Maintenance Handbook "A Guide for Roadside Vegetation Management"

Instructions for completing FDOT Fertilizer Application Log

Date of application: Please give as month/day/year. One log per application, per site is acceptable.

Time of Application: 12 hour or 24 hour time is acceptable.

Name of Applicator: Print the name of the Applicator.

Maintained by Local Maintenance Agreement: Indicate yes or no whether the site is being maintained by a Municipality besides the FDOT.

Date Applicator completed training with Green Industries Best Management Practices: This training is required to obtain the Limited Certification for Urban Landscape Commercial Fertilizer (LCULCF) license in Florida.

Name of Contractor Company: Put name of the business performing the fertilization.

Contact number: provide the FDOT contract number. Example: E8R68. Sub-contractors must also put this number.

Financial Project Number (FPID#): Put the FPID# for the contract.

Applicators License Number: This is their LCULCF license number beginning with letters "LF."

Expire Date: The expiration date of the license.

Fertilizer meet all the requirements of Section 982, Standard Specifications: Indicate if the Fertilizer meets all the requirement of the Fertilizer Section of the FDOT Standard Specifications for Road and Bridge Construction.

Fertilizer Manufacturer: Company name.

Wind Speed: Wind speed in MPH at the site of application.

Type of Fertilizer: Check what type of fertilizer was used.

Labeling of Percent of Fertilizer: Indicate the Fertilizer's analysis of Nitrogen – Phosphorus - Potassium (N-P-K).

Fast Release Source: Put % of fast release ingredients.

Slow Release Source: Put % of slow release ingredients.

Method of Application: Put whether the fertilizer was spread by hand, through a mechanical spreader, injected, or by another method.

Rate of Application: Put the rate. Usually as pounds per 100 square feet.

Amount of Fertilizer Applied: Put the total fertilizer applied at the site for that application. Do not say how many bags were used.

Target Area: this should be the total area that is expected to receive the fertilizer application.

Type of Maintenance Activity: This could be for routine landscape fertilization, for an initial treatment of new sod, or may be to alleviate a specific nutrient deficiency in a tree/palm/shrub, etc.

Target: Indicate what the fertilizer is used to treat.

State Road Number: What state road is the site associated with. Ex: SR 91, Turnpike.

State Road Id: Put the state road ID. This can be discerned from this website:

<https://fdotewp1.dot.state.fl.us/slogis/>

Location of Application: Please put the site name, and which side of the road the application was done.

Mile Marker or GPS Location: Put the geographic extent of the application.