

## Benefits of Using Compost and Mulch in Florida Roadside Plantings <sup>1</sup>

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### Compost

Issues in roadside landscaping are substantially different from those in conventional landscapes or in agriculture, where more intensive maintenance practices are usually the rule. For most roadside plantings, a fundamental maintenance practice -- irrigation -- is not available. Budgetary and/or environmental considerations limit or forbid applications of chemical fertilizers or herbicides. Roadside soils are often poor and will have been disturbed, compacted or otherwise compromised by highway construction activity.

The high cost of extensive sodding means that most grasses used in highway landscapes must be planted from seed. Once germinated, the grass must be able to establish itself in the face of erratic precipitation, little or no fertilization, competition from weeds, and the potentially erosive run-off of rainwater from pavement surfaces. Incorporation of compost in roadside soils can aid in the establishment of vegetative cover by improving the physical and chemical properties of these soils.

The benefits and practical consequences of using compost as a soil amendment in roadside plantings of utility turf are presented in Table 1 .

### Mulch

Mulch is any material applied to the soil surface for protection or improvement of the area covered. Mulches are used in conventional landscapes to beautify plant beds, to modify the soil environment and to enhance plant growth. They are often used in roadside landscapes to prevent steep slopes from eroding until ground covers can become established.

Mulch, when correctly applied, has the following beneficial effects upon a roadside planting:

- Prevents loss of water from the soil by evaporation
- Suppresses weeds when the mulch material itself is weed-free and applied thick enough to prevent weed germination or to smother existing small weeds

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- Acts as an insulator that keeps the soil cool under intense heat and warm under intense cold
- Prevents crusting of soil surface, thus improving the absorption and movement of water into the soil while at the same time reducing erosion
- Prevents soil splash, which helps to control erosion and keeps soil-borne disease from splashing up onto a plant
- Some mulches may add a small amount of nutrients to the soil
- Adds to the beauty of the landscape by providing a cover of uniform color and interesting texture to the surface

Table 1.

<b>Table 1.</b> Benefits and practical consequences of using compost as a soil amendment in roadside plantings.	
<b>Benefits</b>	<b>Practical Consequences</b>
Increases water retention in sandy soils	More water available for grass seed germination and seedling establishment
Enables soil to hold more plant nutrients (increased cation exchange capacity) for longer periods of time	Increases growth rate of grass seedlings which results in faster coverage of seeded area
Provides small amounts of plant nutrients to the soil/plant system	More nutrients available for seedling growth
Reduces soil bulk density and increases total pore space	Provides greater aeration for enhanced root growth and microbial activity. Increases water infiltration and movement into soils which reduces runoff and erosion
Helps moderate soil temperatures	Prevents rapid fluctuations in soil temperature hence, a better environment for root growth
In some cases, reduces soil borne diseases	Healthy stands of grass seedlings
Suppresses the population of certain nematodes	A more extensive grass root system
Positive effect on soil microbial populations	Provides for slow release of plant nutrients