

## Florida Pilot Project

# New Formula May Open Door For Deep Root Tree Injection

**D**AWN MAY break for direct, deep root injection in fertilizing plants and trees in South Florida; some predict it is the destined feeding procedure.

A special formula, called Dine-A-Mo "S," is injected into the roots system by a hydraulic unit. It is being watched carefully by landscape contractors, nurserymen, and government research personnel.

Right now, focus is on a pilot project of the Florida Department of Transportation involving a mile of expressway and city street interchange (SR 836 and Northwest 27th Avenue, Miami). Should this test succeed, Arnold Ramos, District Four Engineer, Fort Lauderdale, is hopeful the method can be used to develop other interchanges in the District.

Nearly 7,000 trees and plants, and 20,000 square feet of Bitter Blue Sod have been planted, and subsequently fertilized by the deep root injection method.

The DRIF (Deep Root Injection Feeding) formula was developed by Howard C. Bardsley, horticulturist for the FEC Fertilizer Company, at

Homestead. It includes DuPont's Uramite, a slow-releasing material to which plants respond quickly, but which continues to supply nourishment for six or more months.

Formerly Charlie Johnson (Charlie P. Johnson Spray Co. of Miami) explored the root feeding technique in South Florida some 15 years ago. He was hindered by inability to get a proper nutrient balance. But his staunch belief in the method helped inspire Bardsley to research numerous formulas, finally resulting in Dine-A-Mo "S."

Johnson then received the first commercial try with the "recipe" which is generating enthusiasm for its compatibility with and stimulating effect on plants and trees. He is using it regularly on South Florida ornamentals.

At the Interchange project, response is being checked for the thousands of plants and trees, including 24 Ficus Benjamina trees, 20 feet tall with 20-foot spreads.

These trees were moved untrimmed, but had been root pruned for almost sixty days prior to the move by the contractor, Ken Lones



of L & G Landscaping in Miami.

Trees were deep root fed five days after moving. It is believed that this has contributed to the high percentage of success by providing immediate food directly to the new feeder roots, thus gaining a quicker response to foliage. Only two of these 24 massive trees show possible signs of nonsurvival.

Other highway test projects being observed by Carl Higgins, Florida Department of Transportation, is the palm-lined Julia Tuttle Causeway (I-195) over Biscayne Bay. This area is constantly swept by salt-laden winds. Higgins expects to



evaluate results for feasibility and economical feeding of such highway trees and plants. The Dine-A-Mo "S" formula is a complete major-element fertilizer, plus an additive containing chelated minor elements.

Briefly, Bardsley summarizes the system as follows:

1) The injection unit (probe) is assembled by FEC Fertilizer Company from a "pistol grip" quick acting valve, a 4 ft. length of threaded  $\frac{3}{4}$ " aluminum pipe and an injection point with splash shield developed by FEC. The entire unit or separate parts can be purchased from FEC Fertilizer Co.

2) Any size sprayer or tank can be used as long as it has mechanical agitation. Mechanical agitator is necessary because the Dine-A-Mo "S" tree and shrub fertilizer is primarily a suspension mix similar to wettable sulfur rather than a liquid or water soluble fertilizer.

3) Each "shot" is two quarts of liquid which contains the correct amount of Dine-A-Mo "S" tree and shrub and FEC Claw-El minor element mix.

4) The number of injections per shrub or tree varies depending on the size of the plant. Basically, small shrub hedging is injected one "shot"

at 3-foot intervals. Large shrub hedging is two "shots" at 3-foot intervals and large shrubs and trees vary from 3 to 5 shots depending on size.

5) Dine-A-Mo "S" tree and shrub is 16-22-22 analyses suspension fertilizer mix that feeds for about six months. FEC Claw-El is a spectrum chelated minor element mix containing magnesium, iron, manganese, copper and sulfur.

In photos above: Charlie P. Johnson, left, Howard C. Bardsley and Ken Emerick; and at right, Emerick feeds a mango tree.