

Lovell Lawn and Landscape raises Live Oaks in Dairy Compost

Joe Pope, Erath County Extension Agent - Agriculture (retired), Texas Cooperative Extension, worked with Lovell Lawn and Landscape, a small landscaping business located at 6744 South U.S. Highway 281, Stephenville, to evaluate the use of dairy manure compost as a potting media for small Live Oak trees.

Jason Lovell, president of the landscape company, primarily had been using bark mulch for potting his plants. As part of the Dairy Manure Compost Utilization Program funded through a Clean Water Act Section 319(h) Grant by US EPA through the Texas Commission on Environmental Quality, Mr. Lovell agreed to work with Pope in conducting a demonstration.

The demonstration compared the use of bark mulch, dairy compost and Bovinite™ as growth media for several hundred Live Oak trees being grown by Lovell. Bovinite™ is a commercial dairy compost product specially processed to reduce overall salt content and to increase the nitrogen to phosphorus ratio. Further, the material is much less dense than typical dairy manure compost and contains high organic matter content.

Each treatment was introduced as the growth media when the Live Oaks were repotted from 30-gallon to 45-gallon containers between February 2004 and September 2004.

Initially, Pope and Lovell planned to take measurements on changes in tree diameter and other indicators of plant response. Opportunity to sell the trees, however, precluded collection of measured growth data but the following observations were made.

Lovell noted that Live Oaks grown in the Bovinite™ exhibited the best overall performance followed by those grown in dairy compost. Trees grown in

PREPARED IN COOPERATION WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AND U.S. ENVIRONMENTAL PROTECTION AGENCY

The preparation of this report was financed through grants from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality.

those media outperformed those potted in the bark mulch in rate of growth, root proliferation and overall appearance.

Specifically, Live Oak trees grown in the dairy manure compost and Bovinite™ required less frequent irrigation and were less likely to stress for moisture due to delayed watering than those potted in the bark mulch. In addition to improved performance, the use of dairy compost and Bovinite™ also resulted in some time and labor savings.

The dairy manure compost utilized in the demonstration had a lower organic matter and higher inorganic (sand) content than the Bovinite™ or bark mulch. Consequently, containers with Live Oaks potted in dairy manure compost were heavier than those with the trees potted in the bark mulch and the Bovinite™.

However, Lovell reported that his customers were pleased with the condition of the Live Oaks potted in the dairy manure compost and unaware or unconcerned about the weight differences.

Lovell Lawn and Landscape continues to buy about six truckloads of dairy manure compost a year from the commercial composting operations located in the North Bosque River watershed. The majority of the compost is used in the maintenance and renovation of landscapes (lawns, flower beds, etc.) for customers that include private home owners and businesses in Stephenville and surrounding communities.

Currently, the company produces only a limited number of container grown trees. For this, Lovell utilizes a commercial potting media that contains dairy compost and is specifically formulated and marketed for that purpose by a local composter.