Native Plant Establishment in Late Summer 2012 Results

**Materials and Methods**

The resources and data for the study were Quantum Agrology (Coastal Live Oak), Quantum Agrology (Coastal Valley Oak), Calluxenococcum Occidentale (Spice Bush) and Helichrysum Obconicum (Ocean Spray). These plots of planting took place August, September and October 2009. In August, half of the group was given a one time application of TRWG at the time of planting while controls were given 2.5 gallons of potable water over the entire growing season, beginning 8/9/09 with the last watering on 10/7/10. One application of TRWG was provided giving a 90 day supply of continuous moisture to the plants. 12 TRWG plants were watered once with 2.5 gallons of potable water at the time of planting, 12 TRWG plants were watered once with 5.0 gallons of potable water over the entire growing season, beginning 8/9/09 with the last watering on 10/7/10. Planter were set up at the DeWine Manufacturing facility at 1642 Hageman Avenue in Souderton, PA. The trays were 3" x 3" x 3", with the plants being set into plastic coated trays (each tray held 12 plants). All plants were watered in 2" (50 mm) increments, every other day. All plants were measured on 8/19/09 and 11/19/10. All measurements were made from the time of transplanting and included any application of a 90 day supply of TRWG at a 3 inch perforated tube placed 2 inches from the root zone. August 3 inch control plants were placed with 2.5 gallons of potable water once at the time of planting and received only one application of a 90 day supply of TRWG at a 3 inch perforated tube placed 2 inches from the root zone. August 4 inch control plants were placed with 2.5 gallons of potable water once at the time of planting. 3 inch and 4 inch control plants were watered once with 2.5 gallons of potable water once 2 weeks after the initial watering. The process of this control water regime was to make sure plants had consistent moisture until the beginning of the rainy season beginning in late October early November. Dry weight data was gathered 4 weeks after the initial watering. Results were measured on a calibrated scale at the tasting facility in Silverdale, PA. The 4 inch and 6 inch mass data was gathered in 12 increments: the first was the post spring watering, May 3, 2010, the second was the post first growing season through the fall. Plant height data was gathered on October 27, 2010 and plants were measured for height in inches from the bottom of the plant stem to the plant apex.

**Results and Methods**

This study indicates that root mass growth improved most dramatically with plants that were established with TRWG in August. The first analysis compared August planting with TRWG planting to controls. Results show that TRWG planting was over a 1.95 greater than controls. The second analysis showed that planting in August resulted in a 60% increase in root mass growth over September plantings and a 100% increase in root mass growth over October plantings (See Analysis #1). This result indicates that plants that have more time to establish will aid the formation of TRWG better than that of controls.

Another significant result was root mass growth after the first season (one analysis). Results that showed that plants that were established with TRWG in August showed a 24% increase in average root mass over control plants.

Both significant results were due to root mass growth after the first season (one analysis). Results that showed that plants that were established with TRWG in August showed a 95% increase in average root mass over control plants.

**References**