

Evaluation of Hydretain 2X on Container Grown Trees

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During the month of January 2001, 3-gallon Live Oaks were transplanted into 35-gallon black plastic nursery containers. The substrate used consisted of 80% 0-1" pine bark and 20% hardwood fines having 87% pore space and a water holding capacity of 13%. All trees were planted and maintained under standard growing conditions at Reevesville Tree Farm, Reevesville, SC.

On 24 April 2002 (15 months after transplant) the experiment was initiated. There were three treatments with twenty replications per treatment:

Treatment 1: substrates treated with Hydretain 2X every three months, rate used was 130-ounces/80 gallons water (irrigation was kept at a 33% [1/3] reduction throughout the experiment)

Treatment 2: standard irrigation volume (positive control)

Treatment 3: reduced irrigation (irrigation was kept at a 33% [1/3] reduction throughout the experiment)

Irrigation volumes were adjusted according to weather and time of year. Treated substrates used 80-gallons of Hydretain for twenty containers; therefore, each container received 4-gallons of solution. Treatments were applied on the following dates 24 April, 24 July, and 25 October.

Caliper of trees was measured at 6-inches above the substrate and recorded monthly. The final measurement was recorded on 10 December 2002 and data statistically analyzed using a T-test.

Results demonstrated that Hydretain treated substrates produced the greatest caliper growth at 0.89 inches followed by the positive control at 0.84 inches. The negative control produced the least amount of caliper growth at 0.64 inches. Statistics showed no difference between the Hydretain and positive control treatments; however, there were differences between the negative control and these two treatments. Based on these results Hydretain may be capable of producing the same caliper growth on Live Oaks with reduced irrigation volumes under these conditions.

Overall Caliper Growth

