Growing Container Plants in a Pine-Tree Substrate: Results at the Nursery Level©

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Early Trials. Dr. Wright supplied us with limited amounts of pine tree substrate (PTS) from his hammer mill at Virginia Tech starting with the 2006–2007 growing season. This PTS was a ready-to-use combination of pine chips and pine bark milled together into a homogeneous mixture. We planted a wide range of items in this ready to use substrate and were very pleased with the overall growth and quality of the plants in the trials.

In the Spring of 2008 Virginia Tech supplied 40 ft^3 bags of hammer-milled pine chips in various screen sizes. The chips were then hand mixed with our normal pine bark in various proportions. All mixes grew very nice plants. The only problem that we had was some settling of the substrate.

Baby Steps. In late August 2008 we purchased pine trees from a thinning operation and Dr. Wright had them custom ground at a commercial mill. It took the crew and entire day to chip and hammer mill a single 60-yard truck load. After the chips arrived at Lancaster Farms, we made a layer cake pile mixing milled chips and pine bark (1 : 1, v/v). This mixture was then mixed again using a tub grinder. We were attempting to get as homogeneous as possible mixture. Using our existing potting machine, we then potted a crop of pansy. Marketability of the crop was equal to our standard pine bark mix. One very interesting fact was the root growth of the PTS was superior to or normal bark but the overall crop was about the same.

Fall 2009. Working with Dr. Ron Walden, we purchased hammer-milled wood chips produced by the Sun Grow Company in Elizabeth City, North Carolina. To avoid triple handling the milled chips, we decided to use our existing in-line mixer and potting machine. The final substrate was a ratio of 75% pine bark and 25% chips. This resulted in less wood chips that prior trials but thus far has produced acceptable results. Our entire fall pansy and early spring perennials are now growing in this substrate.

Future. We are very encouraged in our use of PTS and plan to continue using it on a regular basis. Our ultimate goal is to set up our own PTS operation. We would purchase logs, chip them, hammer mill (blending bark) for our potting requirements. The estimated cost for a chipper, hammer mill, conveyors, loader, concrete, electrical connections, etc. will be an investment of close to $500,000.