Composting Leaves for Potting Mix

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At Appalachian Nurseries, we have been composting leaves for over 10 years. We began this procedure more out of service to our local borough than as a possible source of potting media. However, as our compost pile grew over the years, we decided to use it in our potting mix to cut costs. The subject of this paper is how we have developed a low input, low tech, unregulated, low cost method of composting leaves and nursery debris. It has become a win-win partnership for our local municipality and Appalachian Nurseries.

The basics of the partnership are these: we provide the space and the borough of Waynesboro provides the leaves and equipment.

If that sounds simple, maybe that's because it is. I am a firm believer in the KISS theory.

It should be noted that our nursery is located in a medium density residential zone within the borough of Waynesboro. Because we are using only leaves and plant debris in this procedure, the state regulations directing composting of this type in Pennsylvania are minimal and not a problem. There is no paperwork or written agreement; no money changes hands. We both just do our parts. The end result is that the borough saves money on leaf disposal, and Appalachian Nurseries saves money on potting mix. No grid lock here; just cooperation.

Before starting leaf collection in the fall, the borough uses its Hi-Lift to stockpile the previous year's compost. This clears the area needed for the current year's leaves. Total area used is approximately one acre. We windrow the leaves into piles about 100 ft long, 10 ft wide, and 5 to 6 ft high. Throughout the year, we add debris from the nursery—leaves, discarded plants, and used propagating and potting mix. We also allow adjacent neighbors to dispose of grass clippings and yard debris onto the windrow. This, of course, makes good relations and negates any possible objection to the composting. The makeup is approximately 80% leaves (mostly maple and oak), 15% nursery debris, and 5% yard debris. We add lime and some fertilizer to help with the composting. However, we aren't concerned with a fast rate of decomposition, so the amounts we add are not critical. We try to turn the windrows with our own tractor about once a month through the year. Near the end of the year cycle (about August), we combine the windrows two months before the borough comes to stock pile for the year.

After being stockpiled, the compost from any one year will sit for at least two more years before being used. It will continue to break down, but at a much slower rate. Before using it in our potting mix, we hire a contractor to bring in a portable soil shredder and process enough compost for a year's supply. The compost alone contains approximately 10% perlite. We mix additional course perlite at the rate of 1 perlite : 2 compost (v/v) and adjust the pH down to pH 6 with sulfur. The pH of the compost ranges from 7 to 8. We fumigate the prepared mix with methyl bromide, then store it inside until needed. We use approximately 150 cubic yards of this mix per year in our liner production. We pot into 2½-, 3-, and 4-in. pots a broad range of hardy ornamental plants such as *Viburnum*, *Taxus*, *Thuja*, *Chamaecyparis*,

Pinus, *Picea*, *Tsuga*, *Cornus*, *Prunus*, *Forsythia*, *Spiraea*, *Weigela*, and other flowering deciduous shrubs and trees. We do not use this mix for any ericaceous plants such as *Rhododendron*, *Ilex*, *Pieris*, and *Oxydendrum*.

The mix tends to be on the heavy side. Therefore we add composted pine bark (aged Pro Base from Summit, Inc., Louisburg, NC) at the rate of 1 bark : 2 mix(v,v), if potting into pots larger than 4 in. This procedure has enabled us to eliminate buying custom prepared mix and thereby cut our cost of mix by over 50%.

In summary, this procedure works because of cooperation with our local municipality and our ability to take a relatively long time to compost and stockpile a large amount of finished material. There is 800 to 900 cubic yards on hand at any one time. The advantages as stated earlier are: (1) the municipality can dispose of its leaves and save money; and (2) the nursery can generate a constant supply of potting mix and save money.