WHY WE CHANGED TO A PADDLE MIXER

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As we began looking at ways to increase our productivity in mixing potting media we realized we had three problems to alleviate. Our potting production requirements had outgrown our existing mixing method. It required too many man-hours to provide enough mix to keep up with our present potting production, and we were unable to blend small amounts of micronutrients and other amendments using our old system.

In the old process we used a manure spreader[1] which required many time-consuming steps. The following procedure required four persons:

1. A front-end loader was used to premix a four to one ratio of pine bark and sand.
2. The premix was loaded into the spreader.
3. Fertilizer and lime were added at the recommended rates.
4. The spreader had to be moved forward periodically as it unloaded.
5. The loader then pushed the mix into a pile.

This process became too much of a burden as our level of production increased.

To provide the quantity and quality of mix to meet our current production demands, we purchased a Davis Soil Mixer[2], model HD 40. It has a capacity of 5.5 cubic yards and is powered by a 25 h.p. electric motor. Its heavy-duty construction enables us to mix up to 40 percent sand per batch, with a gentle mixing action that will not damage the prills of slow-release fertilizer.

The paddle mixer solved our previous mixing problems with the use of only two operators. One operates the front-end loader supplying the pine bark and sand. Simultaneously, the other works from a platform applying the recommended rates of fertilizer, lime, micronutrients, and any other amendments. After all the ingredients are completely loaded, the machine is allowed to run an additional 3 min. to ensure a through mixing. At the conclusion the mixer unloads the mix through a trap door onto a conveyor that carries the mix into a holding bin.

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[1] Sperry New Holland Manure Spreader, New Holland Inc., 500 Diller Ave., New Holland, Pennsylvania 17557.

[2] Davis Soil Mixer, H. D. Davis Sons Manufacturing Co. Inc., P.O. Box 395, Bonner Springs, Kansas 66012

In our efforts to fulfill our new production demand for mix, we considered purchasing an in-line continuous mixer but decided against it for several reasons:

1. The in-line continuous mixer required a large investment in supplementary equipment such as hoppers and calibrators.
2. Time-consuming recalibrations would be necessary if the in-line continuous mixer were to be used to produce different blends.
3. The in-line mixer would not offer the flexibility we needed to provide mix for different potting applications.

In contrast to the continuous in-line mixer, the paddle mixer did not require expensive supplementary equipment or complicated recalibrations, and it provides the flexibility we need. We can easily provide mix for the following applications:

1. Potting up containers on the potting carousel
2. Potting up any size container in the field from trailers
3. Custom blending mix for other nurseries and landscapers

After six months of use, we are pleased with both the savings and performance of our paddle mixer. We save not only on the cost of labor but also on materials. With the paddle mixer we can use straight micronutrients instead of expensive micronutrients incorporated into complete fertilizers. Between these two savings we estimate that we will fully recover the cost of the mixer in three years. The paddle mixer meets all the criteria we established for our mixing requirements, making it a valuable investment.