

Garbage Growth

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120 St. Louis Ave.
Fort Worth, TX 76104
800.433.5612
817.882.4120
Fax 817.882.4121

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Garbage growth

A byproduct of recycled household trash becomes a media substrate for container production

WastAway Services in McMinnville, Tenn., has found a way to transform household garbage into a media component for plants. The patented and proprietary process shreds garbage, turning it into “Fluff,” a material that resembles a cross between dryer lint and wood pulp. The Fluff is the component used in growing media.

Garbage is carted to the WastAway facility and loaded into a machine manufactured by Bouldin & Lawson. Both companies are under the Bouldin Corp. umbrella.

It is not necessary to sort the garbage — the machine can shred almost all household waste. It separates things like glass, aluminum and steel, which are stored in a separate bin. Later, WastAway sells the metals to a recycling company. The company is researching ways to use the glass.

Tons of Fluff

The McMinnville plant is one of a kind, but WastAway plans to eventually set up processing facilities in cities across the country, said Alan Rowe, director of substrate division at WastAway Services. The McMinnville plant receives 160 tons of garbage a week from Warren County in Tennessee. Because no sorting is necessary, WastAway’s grinding process is half the cost of recycling, Rowe said. WastAway receives about \$40 per ton for garbage.

“With this machine, Warren County is recycling 95 percent of its garbage,” Rowe said. “There are federal grants available to counties that want to set up this process.”

The machine shreds 3-4 tons per hour and runs 16 hours per day. It takes only 30 minutes for garbage to go from raw material to Fluff. The Fluff is mixed with compost and shipped in bulk to growers within a 150-mile radius.

“It’s great for plants that like wet feet,” Rowe said. “With a 50-percent Fluff mix, growers need to cut back on irrigation because



By Kelli Rodda



Alan Rowe, director of substrate division at WastAway Services in McMinnville, Tenn., inspects the Fluff at the end of the processing line.

it holds so much water. It's also salt heavy in the beginning, so the grower needs to flush out the salts on the front end. The salt content comes from the school cafeteria scraps."

WastAway conducts daily heavy-metal tests and the state performs a heavy-metal test every 90 days, Rowe said.

Nursery, lab tests

S&S Nurseries in Athens, Ala., uses Fluff in place of peat in its tree mix, said Tom Strain Jr., sales manager at S&S. He discovered WastAway's Fluff at the Southern Nursery Association trade show.

"It was cheaper than peat, so I said I'd try it," Strain said.

He mixes Fluff with bark, Talstar, magnesium sulfate, lime and fertilizer for his container trees and woody ornamentals.

"The Fluff holds water well and it works well as a soil conditioner. It's not going to completely take the place of all soil conditioners, but it's a good product," Strain said. "You have to drench it on the front side because it has a really high salt content when you first use it."

Jeff Sibley, associate professor of horticulture at Auburn University, is studying Fluff as a media component. The study is still in its infancy, so there are unanswered questions, Sibley said.

"We have found no differences in the growth of several species of nursery plants grown in a mix with incorporation of up to 30-percent Fluff in the place of 30-percent pine bark in a normal 100-percent pine bark mix," Sibley said. "We have evaluated Japanese boxwood, dwarf nandina, dwarf yaupon holly, five azalea cultivars and *Cleyera japonica*, among others.

"We found the same results when growing New Guinea impatiens, dusty miller and weep-

ing figs. However, petunias did not fare so well. We think the 30-percent Fluff mixed with 70-percent bark was too wet for petunias."

Sibley is conducting container field trials at six nursery locations across the Southeast, including the Center for Applied Nursery Research in Dearing, Ga.

"We do have many unanswered questions. The composting process does not eliminate possible inconsistencies of what the raw material was in the source of the garbage. It also does not eliminate the possibility of some fungal pathogens and perhaps some other unknown materials," Sibley said. "Therefore, this is part of the importance of continued research on this material before a wholesale endorsement is applied across the board."

Fluff undergoes a patented sanitization process to free it of pathogens, Rowe said.

Sibley plans to talk about his Fluff research at SNA, Aug. 12-14 in Atlanta, and at the Inter-

Hear **Jeff Sibley** speak
about his **Fluff research**
this fall at SNA and the IPPS
Southern Region meeting.

national Plant Propagators' Society Southern Region meeting, Oct. 24-27 in Greenville, S.C.

More than media

Not only is Fluff a media component in container production, but it can also be used to heel in root balls or for land reclamation, Rowe said. Fluff can be compressed and used as an extruded product similar to plastic or wood. It has already been used to make fencing material, landscape timbers, decking, park benches and parking stops by Composite Products of America, another Bouldin Corp. division.

"This process keeps garbage out of the landfills, it gives growers a less expensive choice for media substrate and it provides a material for making several other products. We're proud of this process and the possibilities," Rowe said.

WastAway was one of 20 companies invited to Earth Day celebrations in Washington, D.C., this year, Rowe said.

◆ **For more:** WastAway Services LLC, P.O. Box 7113, McMinnville, TN 37111-7113; (800) 431-9571; www.wast-away.com. S&S Nurseries, 20830 Huntsville-Brownsferry Road, Athens, AL 35611; (800) 533-2869; www.ssnurseries.com. Jeff Sibley, Auburn University, 101 Funchess Hall, Auburn University, AL 36849; (334) 844-3132; jsibley@acesag.auburn.edu.