

# Recycling media is a viable option for nurseries

Peat and bark costs may drive more growers to try this green practice

By Kelli Rodda



All green waste can be dumped in a tub grinder to make recycled growing media.

It's a common sight at many nurseries — a morbid mound of dead plants, grade-outs and the stragglers that didn't make the sale — hidden on the back of the property. But there's something valuable in that pile: dirt.

It is possible to reuse the media in your waste pile, and it's not a difficult task.

"I've seen it going on more in the industry," said Ted Bilderback, North Carolina State University nursery extension specialist. "It's certainly a resource, and you can do it successfully if you're smart about it."

Avoid using recycled media with plants that are susceptible to *Fusarium*, *Phytophthora* and *Pythium*, said Gladis Zinati, Rutgers University nursery management specialist.

"I wouldn't use it in propagation, simply because of the delicate nature of propagation," said John Ruter, horticulture professor at University of Georgia.

## Daily grind

Plants and media can be run through a tub grinder to make the first stage of recycled

## Recycled growing media at a glance

- ✦ Keep compost piles aerated by turning them or using a forced-air system.
- ✦ Steam sterilization will help kill weed seeds and disease pathogens.
- ✦ Experiment with rates of recycled media added to new mixes.
- ✦ Recycled media work well in crops that resist root rot.
- ✦ Don't use recycled growing media for propagation.

growing mix.

The best way to reuse growing media is to first compost it and heat it up to at least 140°F, Bilderback said.

“If you’re running all your plant material and media through a tub grinder, you need to blend that back into something with lots of carbon. If not, it won’t heat up.”

Once you’ve created a compost pile with the old growing media, don’t pile it too high or it may go anaerobic, Ruter said.

“Keep it on a raised concrete pad so it’s not sitting in water, just like

you would a normal pile of growing media,” Ruter said.

### Ask a professional

It’s not difficult to compost and reuse soil, and it’s a feasible practice for midsized growers, said Mark Highland, president of Organic Mechanics Soil Co. in West Chester, Pa.

“I would suggest working with a local consultant to help you develop a high-quality horticulture media grade,” Highland said.

Highland helped develop a high-grade compost for use in containers



at Longwood Gardens in Kennett Square, Pa. He now sells an organic soil to consumers that can be reused because of its “active biology in products that come from compost and worm castings,” he said.

Highland is talking to Pennsylvania growers about using his soil.

The compost pile must be aerated, which can be accomplished by turning it with a tractor or a commercial turning machine or by using a forced-air system.

“Forced air is an easy method for growers, although it requires an initial investment in the proper equipment,” Highland said.

### Practical applications

Willoway Nurseries in Avon, Ohio, began recycling growing media 12 years ago, said nursery president Tom Demaline.

“I think it’s worth a grower’s time. It’s good material and you can reduce your mix costs,” Demaline said.

New growing media costs Willoway \$34 a yard, while it costs \$12 a yard to recycle and sterilize it.

Willoway runs plant material and growing media through a tub grinder and composts it for three months. The pile is turned monthly. At the end of the composting period, it’s sterilized in a dump trailer equipped with steam lines. It takes three hours to heat the compost to 170°F. The compost is maintained at 170°F for one hour to kill weed seeds and disease pathogens. The nursery composts up

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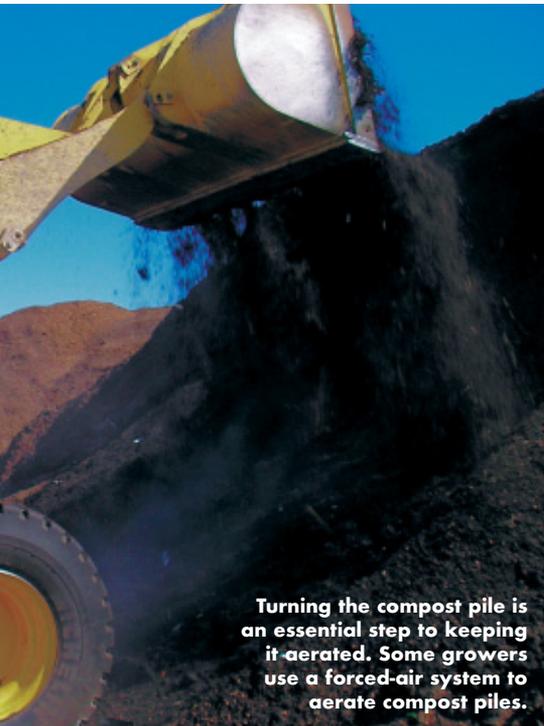
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Turning the compost pile is an essential step in keeping it aerated. Some growers use a forced-air system to aerate compost piles.

to 3,000 yards a year.

"The recycled material is a little finer, so we make adjustments by increasing the percentage of pine bark or other materials," Demaline said.

The compost is mixed in with new growing media at a rate of 7 percent. Willoway also tills recycled soil into its fields.

Monrovia Growers recycles media primarily at its Georgia, Oregon and California facilities, said John Keller, Monrovia director of research.

Both the economic and environmental benefits attracted Monrovia to the recycling process.

"We recycle media and green waste that's generated on site, grind it up in an industrial grinder and compost it for two to three months," Keller said. "We then add it to new growing media anywhere from 25 to 50 percent."

Monrovia primarily uses the forced-air method for aeration, which tends to raise temperatures in the compost pile higher than with the turning method.

"With forced air, you can easily hit 160°F to 180°F, but with turning you typically get up to 160°F," Keller said.

◆ **For more:** Ted Bilderback, North Carolina State University, (919) 515-1201; ted\_bilderback@ncsu.edu. Gladis Zinati, Rutgers University, (732) 932-9375, Ext. 118; zinati@aesop.rutgers.edu. John Ruter, University of Georgia, (229) 386-3907; ruter@uga.edu. The Organic Mechanics Soil Co., (610) 692-7404; www.organicmechanicsoil.com. Willoway Nurseries, (866) 934-4435; www.willowaynurseries.com. Monrovia Growers, (800) 999-9321; www.monrovia.com.

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