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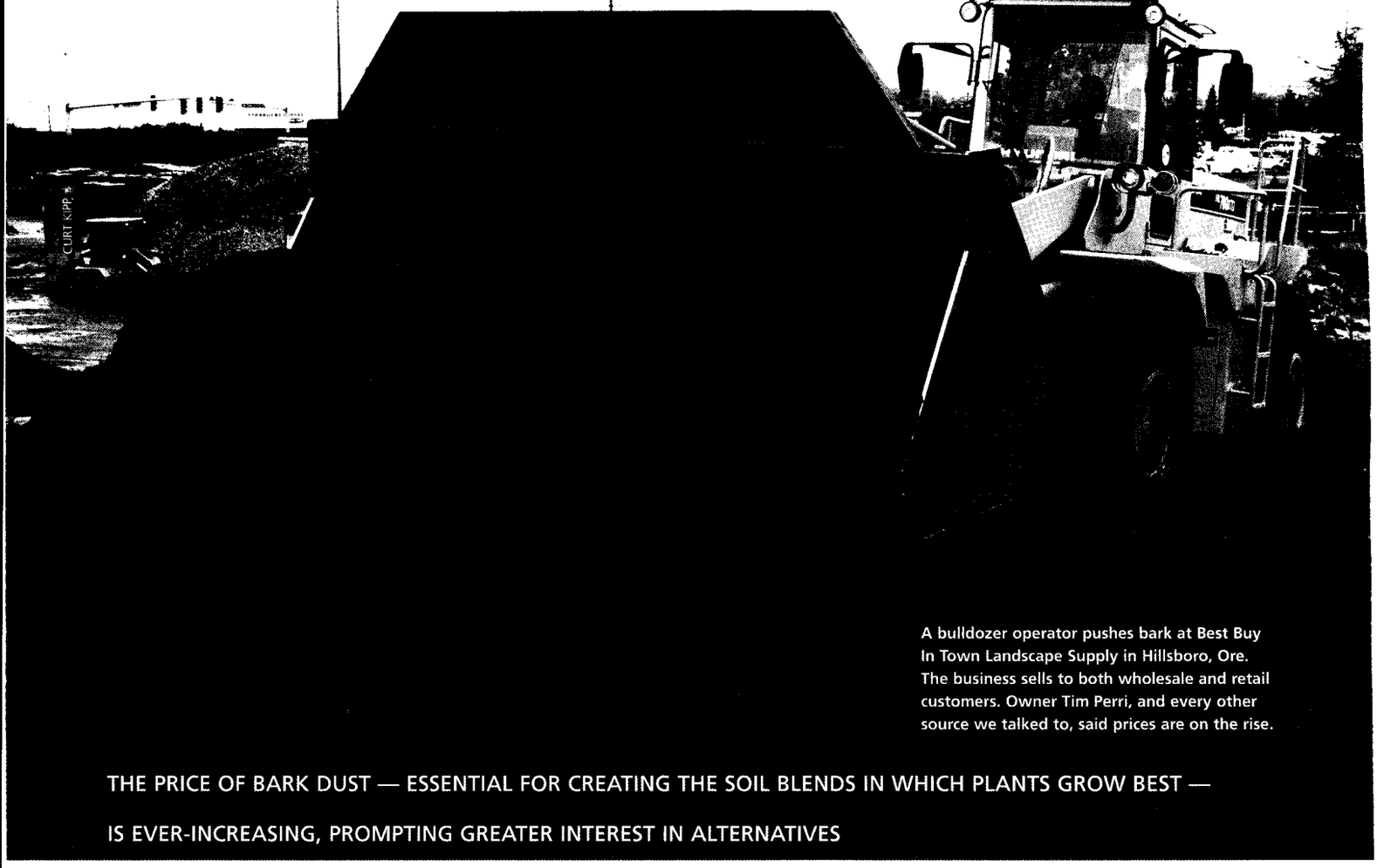

A bulldozer operator pushes bark at Best Buy In Town Landscape Supply in Hillsboro, Ore. The business sells to both wholesale and retail customers. Owner Tim Perri, and every other source we talked to, said prices are on the rise.

THE PRICE OF BARK DUST — ESSENTIAL FOR CREATING THE SOIL BLENDS IN WHICH PLANTS GROW BEST — IS EVER-INCREASING, PROMPTING GREATER INTEREST IN ALTERNATIVES

By Curt Kipp

Bark dust used to be dirt cheap, particularly in the Pacific Northwest.

Oregon and Washington were blessed with an abundance of Douglas fir forests being harvested for lumber to build houses. The milling process produced a byproduct of special interest to nurseries — inexpensive bark dust that could be used as a soil substrate and in landscaping.

"There was a day not too long ago when we were paid to take (bark dust) away from the sawmill, because they didn't know what else to do with it," said Rusty Rexius, president of Rexius Inc., a major bark dust producer in Eugene, Ore.

Growers rejoiced at their good fortune. And life was good.

Not anymore. A nationwide plunge in the housing market has meant homebuilders aren't buying as much lumber. Accordingly, Northwest lumber mills have slowed their production or shut down entirely.

That, in turn, is leading to lower production of bark dust. But demand is undiminished, and that is pushing prices into the stratosphere.

"Over the last 24 months, pricing at the raw materials side has gone up about 400 percent," Rexius said. "Over the last year, it's basically doubled."

Labor costs involved in producing bark have not increased so sharply, but still, Rexius Inc. has had to increase its prices by 20-30 percent over last year.

"You've got a real high demand product and low supply, so you've got a bidding war of people trying to get the product," said Dan Sutton, vice president of Rexius.

In addition to scarcity, rising fuel prices are pushing bark prices upwards, and for several reasons.

Those who sell bark must charge more to deliver it to customers. They also must take into account that diesel fuels the equipment they use to process bark. And if that's not enough, high fuel prices are prompting mills to burn bark chips in cogeneration plants to power their operations, even further reducing the supply that makes it to market.

"We've kind of been spoiled in the Pacific Northwest," said Bill Phillips, owner of Phillips Soil Products in Canby, Ore. "We've always had a bounty of products that have been reasonably priced and available. Now, it's not reasonably priced and available."

According to Tim Perri, owner of Best Buy in Town Landscape Supply in Hillsboro, Ore., both retail and wholesale customers are sure to notice the higher prices this spring.

"I'm anticipating we're going to get some sticker shock," Perri said.

Effect on container growers

To the layman, an increase in bark prices may not mean much. The typical residential user of bark, who uses it for mulch or to dress up flower beds, has three choices. They can either buy less of it, use something else as groundcover such as red rock, or go ahead and plunk down a few extra bills for this year's bark dust delivery.

"If the homeowner wants it bad enough, they're going to pay for it," said Dan McFarlane, owner of McFarlane's Bark Inc. in Milwaukie, Ore.,

For container growers, it's a different matter entirely. With the quantities of bark they use, a price increase is going to hurt.

Most container stock is grown in soilless blends that typically contain

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between 50 percent and 100 percent bark dust. The rest usually consists of peat moss, pumice and other ingredients. Worth noting is the fact that peat moss isn't getting cheaper, either – it's a nonrenewable resource taken from peat bogs, where it has accumulated over thousands of years.

Northwest growers prize substrates consisting largely of Douglas fir bark because of its ideal properties. Such blends can absorb and hold some water while allowing pockets of air to reach roots. That promotes optimum root development and plant growth, which means higher quality products.

Soil blends that are not as porous as bark can suffocate the roots, inhibiting growth if not threatening the survival of the plant.

"(Nurseries) prefer bark dust because the only thing you have to worry about is pH," McFarlane said.

The dramatic hike in bark dust prices over the past few years has these growers quite concerned.

"They're all worried about the fact that since we're not logging as much, bark is not as plentiful," Oregon-based nursery consultant Don Richards said. "And sometimes the bark you find is too fine or too coarse for what you'd like to have, what you've been used to, and what's been readily available in the Northwest."

It's also prompting an increased desire to explore cheaper alternatives. Such research is in its infancy, according to Dr. Jim Owen Jr., an agent with Oregon State University's North Willamette Research and Extension Center in Aurora, Ore.

"Bark replacement is only now being researched," he said.

Although the industry hasn't found a way to replace bark, there are ways one can "stretch" or "extend" the existing bark supply farther by changing the ingredients in soilless blends.

According to Owen, baby steps are not cost effective. To make a real difference in cost, at least a third of the makeup of the blend should be changed, he said.

But at the same time, one must monitor how changing the blend affects its characteristics, such as aeration, water absorption, and acidity.

Even substrate volume can change depending on the ingredients and how they mix together. Settling of the ingredients can result in blends that are less bulky than the sum of their parts.

"One and one does not equal two, due to nesting," Owen said.

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That said, commonly used bark extenders in the Northwest include composted yard waste, pumice and sawdust, Owen said. Each has its issues.

Sawdust works well, Owen said. But for obvious reasons, he added, it is decreasing in supply just like bark. Sawdust buyers must compete against the blueberry growers and bare root tree growers who depend on it.

More and more soilless blend producers, including McFarlane, are incorporating composted yard waste in their mixes, but one should be aware, it changes the substrate's properties

"It's the ratio of aeration to water holding capacity, and you want that balance to grow a plant in a container," Owen said. "It can create too heavy of a mix if you use too much (compost)."

To assure that resulting blends have the right properties, one must know the content. "Any compost has to be very well managed and has to be uniform and reproducible to be used as a soilless substrate," Owen said.

Furthermore, the supply of composted yard waste is limited. "I don't know if the region has enough yard waste to make up for what's going on in bark dust," McFarlane said.

As for pumice, it provides aeration to roots and doesn't affect pH, but it is no less expensive than bark itself, limiting its appeal as a bark stretcher.

They came from the South

In the South, research into bark alternatives is further along. That's no surprise; the region has been facing pine bark shortages for years due to logging cutbacks.

Alternatives that have been researched in the South include pine wood chips, recycled whole trees, and even municipal garbage that's been recycled, processed and sanitized.

The latter is produced in McMinnville, Tenn., by WastAway Services, a subsidiary of Bouldin Corp. Using a patented and proprietary process, WastAway shreds municipal household garbage, in the process removing glass, aluminum, and steel, which go into a separate bin.

In 30 minutes, the garbage is shredded, steamed, sanitized and ultimately transformed into trademarked Fluff®, which can be mixed with compost, *Nursery Management and Production* magazine reported in its July 2004 issue.

A team from the Horticulture Department at Auburn University studied the use of "composted municipal waste" – the untrademarked name for Fluff – as a partial replacement for pine bark in container tree production.

"Our studies at this point suggest that replacing one-third of pine bark with municipal solid waste compost can be effectively used to grow a wide variety of container plants or flowers," the study's summary stated.

As an April 2007 article that Owen co-authored pointed out, there will always be material available with which to make Fluff. Household garbage isn't going away anytime soon.

One problem with Fluff is that it is heavy in sodium. This requires an extra step by the end user to age or flush the Fluff in order leach out salts.

Another problem is that Fluff has higher water absorption than bark, meaning that watering schedules must be adjusted accordingly. This is touted as an advantage for people who want to water their crops less. Research continues into how Fluff can be incorporated into soil blends to achieve the right balance of water absorption and aeration.

Another bark replacement researched in the South is whole tree substrates – the shredding of unmarketable trees to make a bark-like product. Rather than burning these trees as slash or leaving them behind, timber crews can shred these trees on the spot and haul them away.

Elsewhere, there are those looking into rice hulls, corn husks, and even waste matter from the production of coir fiber, which is made from coconuts. All could lessen dependence on bark.

But for now, many sources maintain that bark remains the most cost effective product available for container growers, especially in the Northwest, where so much of it is produced.

And that is likely to continue even as the price of bark escalates with no end in sight.

"Regardless of price," Owen said, "it's probably the best product we have for growing a high-value product." ©

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