

Sawdust Shock: A Shortage Looms As Economy Slows

Home Building Drops, And Wood Waste, Too; The Manure Substitute

By [JOEL MILLMAN](#)

Ernie Johnson figured \$100-a-barrel oil was bound to happen someday. But the 58-year-old businessman Missoula, Mont., never thought he'd see sawdust at \$100 a ton.

The price of sawdust has soared since 2006, up from about \$25 a ton to more than \$100 in some markets. Blame the housing slump: Fewer new homes mean fewer trees cut for use in construction, which leads to less sawdust and other wood waste, driving up the price.

"I've never seen sawdust so hard to find. We're having to go 400 miles to get it," says Mr. Johnson, the president of Johnson Brothers Contracting, which sells everything from chopped bark for landscapers to wood chips for pulp mills.

Sawdust may seem like a lowly commodity, but it is widely used in today's economy. Farms use sawdust and wood shavings as cozy and clean bedding for horses and chickens. Particle-board makers devour it by the boxcar to fashion a cheap building material. Auto-parts manufacturers blend a finely pulverized sawdust called "wood flour" with plastic polymers to make a lightweight material to cover steering wheels and dashboards.

The shortage of sawdust and wood shavings has boosted the cost of boarding horses at the Lazy E Ranch in Guthrie, Okla. Two years ago, the Lazy E paid \$950 per load of wood shavings for its horse stalls. Last month, Butch Wise, who manages the ranch, paid \$2,650 a load. The ranch needs three loads a week.

"You'd think sawdust would be in plentiful and cheap supply, but it's not," he says.

Robert Vader of Fair Grove, Mo., buys scores of bags of fluffy pine shavings a month for his business, called Vader's Bunnies and Pets. The price of each bag has jumped to \$6.25 from \$5 in just a few months. Why does Mr. Vader need so much sawdust? His rodent kennel specializes in breeding mice to sell to owners of snakes and birds of prey.

The housing slump has devastated sawmill production across the country. The Pacific Northwest is expected to produce about 15 billion board feet of lumber this year, a decline of almost 3 billion board feet since 2006. That translates into a shortfall of 1.5 million tons of sawdust and shavings.

It's surprising how many industries use wood waste. Wineries use oak sawdust as a flavoring agent for some wines. Perdue Farms, which raises broiler chickens, goes through seven million cubic feet of wood shavings a year. Oil-rig operators in Wyoming and Colorado pour sawdust into the caverns they find deep inside rock formations as they hunt for pools of petroleum. Sawdust gives drill bits something to grind through.

"A cavern can be the size of a room, or the size of a house," says Gene Stulce, whose Spanish Fork, Utah, company Valley View Distributing, sells sawdust to oil rigs. The price of a 23-ton trailer load of sawdust has jumped to \$2,000 from \$400 or so two years ago. But Mr. Stulce isn't happy: He simply can't find enough sawdust, and the shortage is costing him \$30,000 a month in lost sales. He has laid off 10 of his 22 employees.

The sawdust shortage has also made life hard for Mr. Johnson of Montana. His company's trendiest business is compressed sawdust pellets, a popular fuel used in special stoves that produce lots of heat but little ash. The pellets, made of blended bits of cedar, lodgepole pine and Douglas fir, require dry fiber, without impurities. Tree bark won't do, only sawdust.

The shortage has sent Mr. Johnson on a cross-country -- even cross-border -- scavenger hunt. Working the phones and searching the Internet for sawmills still producing sawdust, he tries to persuade them to sell to him. Last year, he found a mill in Creston, British Columbia, that had contracted to send 40 tons of sawdust each month to a power plant in Kettle Falls, Wash. He struck a deal with the operators of the power plant, agreeing to send them a ton of tree bark and other wood waste from Idaho for every ton of sawdust he diverted from their Canadian supplier.

"It worked great for a while," says Mr. Johnson. "But the Canadian dollar got so strong, I couldn't pay the freight" from Canada. He ended the arrangement in November and cut back pellet production.

The shortage is leading to some unusual solutions. Mr. Johnson now mines old houses that are being torn down for lumber that he can grind up and sell. He has also opened a free wood dump for any construction crew that wants to drop off any two-by-four trimmings from a local site. Mr. Stulce, who runs the Utah wood-waste supplier to oil rigs, says rig operators that use sawdust are now dumping some novel substitutes. "They're pumping in almond hulls, walnut shells, whatever they can get," he says.

Farmers have come up with perhaps the most unusual tactic: using processed cow manure as bedding instead of wood shavings. Many dairy farms have a process to convert cattle waste into methane gas that they sell to electric generators. The byproduct is basically the hay the cows ate. Lee Jensen's Five Star Dairy in Elk Mound, Wis., uses an aerobic digester to render manure into stall bedding, and has so much on hand after the process that he's selling the excess to neighbors.

"Some of them were paying \$3,000 a week for sawdust bedding," the 49-year-old dairyman says, "so they're glad to get it from me." He says his herd likes it, too. With all that extra straw, he's able to lay a thicker bed for his cows, which he says encourages them to stay off their feet. That increases milk output.

As with every economic upheaval, there are winners as well as losers. With sawmill waste harder to find, opportunities for profit from scarcity are coming out of the woodwork. Boy Scout troops in Oregon fattened their coffers in January collecting discarded Christmas trees. Troop 618 in Beaverton made \$3,000 hauling trees to a lumber recycler. Troop 728 made \$10,000.

Kevin Jump, a Kalispell, Mont., logger, is making a killing in logging "slash," the branches, treetops and stumps logging companies used to leave on the forest floor. Mr. Jump delivers coarse sawdust called "hog fuel" to the Smurfit-Stone Container Corp. carton mill in Missoula, which pays up to \$45 a ton for what he brings in.

A recent workday for Mr. Jump's crew began at 3 a.m., when a caravan of chipping machines left Kalispell to harvest slash outside Libby, a small Montana community near the Canadian border. After locating piles of snow-covered wood waste, the team dropped loads of frozen wood into an industrial grinder that reduces wood chunks to bits the size of playing cards in seconds. Sent up a loading belt, 20 tons filled a waiting trailer in about an hour.

"Shake the snow free," Mr. Jump shouted over the roaring machinery. Mix too much frozen wetness into the hog fuel and the entire shipment might be rejected upon arrival, after a 190-mile trip to Missoula. Working well past dark in temperatures dropping to near zero, Mr. Jump's team took out eight loads by quitting time. Their estimated haul for the day: \$8,000.

QUESTIONS:

- 1.) Explain how the decrease in new home construction helped the price of sawdust rise? Apply the supply and demand analysis.
- 2.) Apply the supply and demand analysis to show the effect of an increase in the price of sawdust on the new entrepreneurial effort of scavenging the forest floor for logging waste?
- 3.) Apply the supply and demand analysis to show the effect of an increase in the price of sawdust on the quantity of sawdust demanded as consumers switch from sawdust to processed cow manure, almond hulls and walnut shells?
- 4.) Apply the supply and demand analysis to show the effect of an increase in the price of sawdust on the demand for employment in the sawdust industry.