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Can American Farms Make Bamboo the Next Big Cash Crop?

Bamboo has come into vogue as a green, sustainable resource that's used for everything from cutting boards to clothing to wood floors. But until now, almost all of the bamboo in products sold here has come from overseas. That could change soon, as new planting techniques may lead to millions of new acres of bamboo shoots in the American South.

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Could the Mississippi Delta become America's bamboo belt, the breadbasket of a new class of homegrown structural building components? Earlier this June in Greenville, Miss., a group of engineers, manufacturers, bureaucrats and farmers gathered to discuss how land formerly cultivated for cotton might be converted to produce bamboo on a massive scale. Teragren, the world's largest bamboo building products manufacturer, has engineered new structural joists made of imported Moso, a bamboo species with the tensile strength of steel. Teragren VP Tom Goodham says a domestic Moso source is the key to renewable structural timber becoming mainstream and affordable: "The whole bamboo building-products category is just on the cusp of critical mass."



*Could bamboo forests like these revive Mississippi Delta agriculture?
(Photograph by David Sanger/Getty Images)*

He's not the only one feeling optimistic after the meeting. Attendee Jackie Heinricher, owner of Boo-Shoot garden, has devised a method to clone mature culms of Moso grass. The plants flower only once every 60 to 100 years, so growing quantities from seedlings is impractical. When planted as cuttings, she adds, plants don't survive at a profitable level. Clones are the answer. "We're talking about planting hundreds of thousands, if not millions of acres," Heinricher says. "This technology makes it possible." Foreign bamboo kingpins have approached Heinricher with offers to buy her technology. She has kept her secret, which took a decade of research to create. "I always held fast to this vision of a U.S. source," she says. Goodham adds that importing bamboo is not inherently wrong—he says about 90 percent of China's bamboo comes from sustainably maintained ancient forests—but postearthquake revisions to China's building codes may lead to more structural bamboo use there, stretching the current supply worldwide. Plus, "In general, when you can manufacture items closer to where they'll be consumed, you lower the environmental impact," Goodham says.

Heinricher envisions bamboo forests reviving the Delta's agricultural economy, which once relied on cotton crops but has generally fallen on hard times. Dr. Brian Baldwin, associate professor of plant and soil sciences at Mississippi State University, says mild, wet winters have helped bamboo species closely related to Moso do "exceedingly well here." He considers the region viable for large-scale production. Ted Rose, principal of the consulting firm Rose Carbon, predicts economic opportunities for farmers in the emerging marketplace of cap-and-trade commerce. Bamboo agriculture can generate "carbon reduction" credits under current cap-and-trade rules, Rose says, so farmers producing Moso in the Delta could potentially sell their credits on the open market. Citing examples of Moso farms in Nicaragua already taking advantage of these transactions, Rose says, "It's just another revenue stream for farmers."

But getting the revenue flowing could prove to be the biggest obstacle. Unlike cotton, which promises a return on investment at the end of a single growing season, bamboo crops must mature for three or four years before they're

ready for the first harvest. Baldwin adds that some developing acres may be unable to generate profits for even longer. "It's never an agronomic or horticultural problem," Baldwin says. "The material will grow, and will grow well here. It's always an economic problem." Echoing other attendees, Ted Rose says, "The biggest downside is the short-term risk for farmers. They're very concerned about next year's profit. With no significant government support, [switching crops] takes a leap of faith."

That leap of faith will probably come from "landowners with enough moxie to just go for it," Heinricher says. Rose says the next step in the Delta is a test plot planting, but Heinricher disagrees. The McIlhenny family, of Tabasco fame, began the first test trial of Moso in 1910 on Avery Island, Louisiana. Clemson University has a mature test grove, as does Auburn University and Oak Ridge in Tennessee. "We're the only country in the world not making things out of bamboo," Heinricher says. "It grows here. What more do we need to test?"

In the meantime, Teragren's product research has proven that Moso's load-bearing capacity is three times that of modern wooden structural materials. Using "younger and younger trees," Goodham says, produces "material not as strong as when we were harvesting old-growth timber." He predicts bamboo building materials will become economically viable once Teragren can begin production in a domestic manufacturing facility. As for when, Heinricher says, "I think there's going to be a tipping point. It's going to be an energy company or landowner who's not going to wait around. This is going to happen."

Although companies like Teragren believe the venture will be profitable, Goodham says, "It's hard to look into the future five years and say, 'We can guarantee you this price for this material.'" But, he continues, "the visionaries who take the leap will be well rewarded." New plantings are already being planned, according to Ed Johnson of the Delta Economic Development Center. He says that without the conference, which he helped organize, the talks wouldn't be taking place. As for any aspiring bamboo moguls interested in getting in on that discussion, Johnson says, "There is quite a bit of land for sale in the region."