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Could Bamboo Replace Steel in Concrete Structures?

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The fast-growing and prolific bamboo plant has some in the construction industry wondering if its high-tensile strength and resilient nature make it a perfect fit for more sustainable building, [Sourceable reported](#).

Bamboo, a member of the grass family, has long been used in structures in other parts of the world, but the idea of using the abundant vegetation as the structural support for poured concrete is also gaining traction from those focused on building greener infrastructure.

Unlike the wood from harvested trees, bamboo can be harvested without destroying the root system that supplies the culm, or body, of the plant.

Typical uses for the plant require the entire stalk or a woven lattice structure, but research could lead to the development of new uses.

According to reports from the Massachusetts Institute of Technology (MIT), teams are also looking at how portions of the culm could be processed and bonded into plywood-like building materials.

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“Bamboo grows extensively in regions where there are rapidly developing economies, so it’s an alternative building material to concrete and steel,” MIT Professor Lorna Gibson said in an *MIT News* article. “You probably wouldn’t make a skyscraper out of bamboo, but certainly smaller structures like houses and low-rise buildings.”

While the plant is susceptible to insect infestation and general degradation, there may be opportunity to alter the material to provide improved durability and a wider range of uses.
