

NEWS

From GEORGIA TECH'S ENGINEERING EXPERIMENT STATION

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WASTES FROM FARM, FOREST
MAY BECOME USABLE FUELS

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ATLANTA, GA -- Soon, the fuel in backyard barbeques may be made by a process invented at Georgia Tech.

Tech's Engineering Experiment Station has found a way to grind up all kinds of farm and forest products, then compress them into briquettes or "logs."

There's nothing complicated about this technology. The key is in the "glue" which holds together ground particles.

Manufacturers make briquettes using starch to keep charcoal from crumbling. Tech engineers have found a substance that sticks to any particle of wood or plant matter. It's cheaper to use than starch or any other chemical on the market.

"We've applied for a patent on this invention, so right now we can't reveal what the substance is," says Tom McGowan, director of Tech's Energy Technology Branch. "But it's available anywhere in the world and easy to work with. You can mix it with wood chips and water, and make a 'log' in any shape with your hands."

McGowan sees this invention as a way to conserve energy on a large scale.

"Right now, we're throwing away an incredible amount of usable fuel simply because we can't shape it into a form that can be used in stoves or furnaces," he says. "With our process, it's possible to make a briquette or a log with all kinds of waste

materials -- discarded tree limbs, dead corn stalks, straw, even the clippings of vines in grape arbors."

The invention may be most attractive in those poor countries where desert land is overtaking forests and trees are being cut for firewood so fast that natural reserves are dwindling. One of the sponsors of Tech's research in this area is the Agency for International Development. This organization is trying to find a way that Sudanese villagers without a power source can make their own charcoal briquettes from wood.

The main source of energy in the Sudan is lump charcoal. When villagers make this fuel, approximately a third of the charcoal crumbles before it can be used. Georgia Tech is helping the Sudanese to produce briquettes which won't fall apart. The Tech process will allow production of char from abundant agricultural products. These plant wastes are not used at present in the Sudan because they yield only charcoal dust.

In another project, Tech is developing a method for recycling Italian grape arbor clippings into "logs."

Three years of research have gone into the establishment of this process. McGowan says his branch will need \$200,000 to \$300,000 for each of the next two years to complete its work.

"There are still a lot of unknowns to solve," he says. "But I really believe our technology will be simple and cheap to use. We expect it to make a real contribution to the energy needs of industrial and developing countries."

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