OSU finds use for Eastern redcedar

One man's trash is another man's treasure. This could soon be true of the Eastern redcedar tree if Salim Hiziroglu, an assistant professor in the forestry department at Oklahoma State University, has his way.

The Eastern redcedar tree has plagued Oklahoma ranchers and landowners for years, said Terry Bidwell, extension range management specialist and professor of rangeland ecology and management at OSU.

"The redcedar has caused widespread damage," Bidwell said. "As the cedars spread, not only are cattle grazing and farming affected, but also many wildlife species diminish and the quantity of water declines as well."

Bidwell said because of the Eastern redcedar, Oklahoma is in danger of losing the prairie chicken, the bobwhite quail and the wild turkey.

Oklahoma landowners have spent years looking for ways to fight the onslaught of the Eastern redcedar. Everything including applying herbicides and walking the land with clippers has been tried, but barely seems to make a dent, said Rodney Holcomb of the OSU Food and Agricultural Products Research and Technology Center.

Holcomb and Bidwell both said controlled burning can be effective, "However with more and more people moving out into the country and the risks that Oklahoma's wind brings to the table, in many cases burning is no longer a viable solution," Holcomb said.

The problem has gotten to the point that the state has established programs to aid landowners financially in their quest to clear their land of Eastern redcedars and restore it to a more useful and profitable condition.

"We've got hundreds of thousands of acres in Oklahoma that are out of business because of redcedar," Bidwell said. "We can change that, but it will cost."

Now, Hiziroglu thinks he may have finally found a use for the Eastern redcedar. A native of Turkey, Hiziroglu said ever since he began working at the forestry department at OSU, people have been asking him for advice on how to handle the Eastern redcedar problem on their land.

"So I decided to find a way to make use of something that everyone else thought of as waste material," said Hiziroglu.

His solution is particleboard made from Eastern redcedar, produced in a much more efficient and cost-effective manner than the current production method.

Using the current system, a hardwood tree such as oak or pine is brought to the mill, the limbs are removed, and the bark is shaved off before it can be chipped and manufactured into particleboard. This process is costly and creates waste.

When Eastern redcedar is used to make particleboard, nothing goes to waste. The tree, limbs, bark and even the needles are run through the chipper and eventually become particleboard. This method has proven to be less expensive and faster.

In addition to helping landowners and improving product efficiency, using Eastern redcedar has environmental advantages. As Bidwell said, the tree itself is a drain on the ecosystem, using up water and taking over the land; consequently, removing it is desirable. Since the manufacturing process uses up the whole tree, no waste is created.

A particleboard product made from Eastern redcedar can have many uses because the structural properties of the experimental panels are comparable to products currently on the market, so it can be used in many typical situations, such as manufacturing furniture. In addition, since the oil in redcedar that gives the tree its odor is a natural insect repellent, using the particleboard as a closet liner would give the closet a cedar chest effect, keeping away moths and other pests.

The potential boon to Oklahoma that could come from this discovery is interesting, to say the least. After all, there seem to be quite a few advantages to producing particleboard made from Eastern

This pasture near Perkins, Okla., is an example of what was once productive rangeland, now being overrun by Eastern redcedar. These trees could be a wanted commodity for farmers and ranchers some day. (Photo by Jason Mabra)

redcedar. In a way, it will be almost like getting paid to haul off trash, Holcomb said.

Holcomb also said landowners eventually will be able to clear the Eastern redcedars from their land, haul them down to a particleboard mill, and get paid for their product, just like a crop. A crop that requires no input, is already there and is beneficial to remove. What a way to make the best of it.

So how long until this will be underway? Holcomb said it could happen as early as next year.

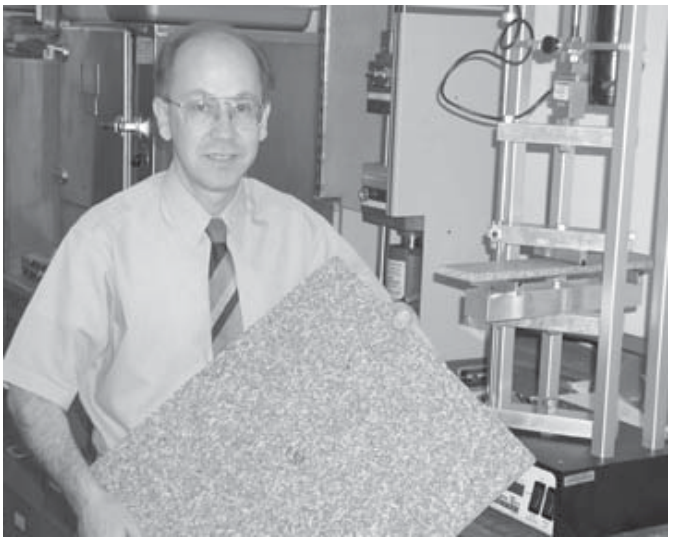
"The first thing that has to happen is to get a particleboard mill built in Oklahoma, which will probably cost from $3 to 3.5 million," Holcomb said. "To get this done, there will have to be corporate financial backing. There are several interested parties, but most are waiting on the approval of a patent, which has been applied for but not secured."

They are also waiting on the outcome of an economic model on which Holcomb and agricultural economics spring 2002 graduate, Chad Greenlee, have beenworking.

This model will show all costs of operating a particleboard mill, such as equipment, land, labor, buildings and utilities. Holcomb said most of the interested parties want to locate the potential mill in central Oklahoma, possibly just east of Oklahoma City.

"This is a product that has the potential for national marketing, because it measures up to the competition and will cost considerably less," Holcomb said.

If it catches on, one mill would not keep up with the demand, meaning more jobs and more money to areas of the state as more mills are built, Holcomb said.



Salim Hiziroglu is optimistic that a mill will soon be producing his Eastern redcedar particleboard somewhere in Oklahoma. (Photo by Jason Mabra)

The addition of a particleboard mill or mills would mean jobs and a financial windfall for the communities that manage to attract the business, so public support for this project would seem inevitable.

Chalk up yet another exciting discovery for Oklahoma State University. Anytime a person finds a way to turn trash into treasure, it's worth getting excited about.

❖*By Jason Mabra, Fargo, Okla.*