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owners who are being driven from their backyard barbecues by these Asian cockroaches, which have the annoying habit of taking flight just about sundown.

## RESEARCH

### Thick lawns appear to limit runoff speed

Thick lawns may well limit pesticide runoff, according to research being conducted by Dr. Tom Watschke at Penn State University.

"Thick lawns slow the velocity of runoff and allow the water to infiltrate," he notes. Infiltration into the ground is more desirable than runoff because microbes in the soil help break down the chemicals into harmless materials, he also says.

In one of Watschke's experiments, a sodded plot without soil patches showing through registered a rate of 1/2-gallon per minute runoff. On the other hand, another plot that was thinly seeded with a lot of bare spots registered a rate of 7 1/2-gallons per minute runoff.

"The next step will be to add commercially available registered pesticides and nutrients to study their effects," Watschke claims.

## BIOTECHNOLOGY

### Pathologist 'in dutch' over a possible cure for Dutch elm

A researcher at Montana State University ignored federal regulations by injecting 14 elm trees with a genetically-altered bacteria.

Calling the regulations "ludicrous," plant pathologist Gary Strobel, Ph.D., injected the bacteria as part of an experiment to find a preventive treatment for Dutch elm disease.

He filed for EPA approval to conduct the experiment, but did not wait for an answer because it would have meant delaying his experiment a year.

Reaction to Strobel's action has been mixed within the industry. Harvard professor emeritus Bernard D. Davis, a bacterial physiologist, told the *New York Times* that many researchers will "secretly cheer" the action though the ramifications on the industry could be severe. While Davis was confident that Strobel's experiment was safe, he said "the law is the law."

EPA has yet to take any action against Strobel, but is evaluating the situation. Punishments could range from a warning letter to civil fines or even a prison sentence.

Biotechnology critic Jeremy Rifkin announced that he would file petitions with three federal agencies seeking action against "this wanton, deliberate, intentional violation" of guidelines regarding genetic experimentation.

Strobel, commenting to a Montana State University committee investigating the situation, considered the use of genetically altered bacteria "minor." Following the meeting he said, "We can sit and talk about Dutch elm disease or we can do something about it. I chose to do something about it."

The bacterium, of the species *Pseudomonas syringae*, produces an antibiotic that kills the fungus that causes Dutch elm disease. The bacterium is naturally occurring.

## GOLF COURSES

### Grass carp banned in 28 U.S. states

Grass carp, popular in the landscape market because they eat aquatic weeds, are illegal in 28 states, as of

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