Weeds in hot water with new control technique

MINNEAPOLIS—Vigorous weed populations once resistant to traditional herbicide applications are in hot water because of a new control technology that uses a 900,000-BTU spray system fired by a 9 hp gasoline engine.

Weeds are doused with water heated to 210° F. This temperature destroys the plant's waxy coating, thus rendering it unable to retain moisture. The plant dehydrates and dies within one to two days.

Aquaheat Technology, Inc. markets the new weed control spray system, which weighs about 550 pounds and spits out 10 gpm of super-heated water. "It's something that can easily be put into a pickup truck or four-wheel drive vehicle," says operations manager Chapman Mayo. The product holds several patents and others are pending.

A larger, 4 billion BTU version of the device was originally designed for wide-scale vegetation control in Florida citrus groves, but railroad officials were attracted to the smaller system for its ability to eliminate weeds along track rights-of-way.

Others then took interest when it became apparent that the technology can be suitable for other landscape management applications.

Superintendents responsible for golf courses, parks, housing developments, schools and other institutions, local and state highways, military bases and irrigation districts wanted to know if the concept could be applied to their needs, according to Mayo.

"The interest was so great for a smaller system that we developed one," says Mayo. "We feel that this product can be used in a cost-effective manner in a number of areas."

Mayo feels that the Aquaheat machine can be particularly effective in situations where the public is concerned about traditional pesticides. "Parks and schools are begging for alternatives to calm people down," he reports, stressing that the technology provides excellent weed control in addition to its ecological features.

A study conducted in New Zealand comparing the effects of hot water versus glyphosate showed that weeds treated with hot water were dead within two days, while those treated with glyphosate took 7 to 10 days for yellowing symptoms to appear.

The technology differs considerably from simply directing a steam cleaner toward lawns. "Steam is not as effective. We feel the hot water does a better job of effectively contacting the plant," says Mayo.

Mayo adds that in the Southwest, the machine is being used on a limited basis for dousing fire ant mounds, and to control aquatic weeds. "If [the weeds] stick above water, we can burn them down to the water level," Mayo reports.

Tests are focusing on golf courses—using the device (with water heated to a cooler 150° F) to control surface insects. "We're watering the grass with hot water, basically," Mayo explains. Bugs near the surface are getting their gooses cooked, while the turf itself is not harmed. "We're not using a tremendous amount of water, so we're not soaking the lawn," he points out.

The New Jersey Department of Environmental Protection tentatively has a positive review of the introduction of the device, according to the agency's Carmen V. Valentin. "Hot water technology to control weeds is an effective tool that can be used as part of an integrated pest management approach," Valentin notes.

"In New Jersey, this technology has the potential for use in sensitive areas such as schools and parks, and areas where the application of herbicides can jeopardize the environment such as barrier islands or the shore areas," she adds.

The Garden State was introduced to the
concept when Asplundh's Railroad Division tested the larger unit. Officials were impressed, according to Valentin.

"The treatment, which is the first of its kind for right-of-way weed control in New Jersey, showed immediate results as once vigorous weeds started to droop and wilt minutes after being sprayed with the hot water," she recounts.

"What made the demonstration even more dramatic is that the rail track had not been used in 13 years and was so overgrown with weeds that it was not visible at all before the treatment," according to Valentin.

Mayo holds high hopes the the technology will be a financial success: "There's a lot of interest from tons of markets."

—James E. Guyette

GREEN INDUSTRY EVENTS
What's going on in the industry

MARCH
1: New Jersey Landscape '95, Meadowlands Convention Center, Secaucus, N.J. Phone: (201) 664-6310.
1-4: Outdoor Power Equipment Dealers Assn. annual meeting, Sheraton Grand Torrey Pines, La Jolla, Calif. Phone: OPEDA, (215) 564-3484.
2: Midwest Sports Turf Managers Association annual meeting, Schaumberg (Ill.) Golf Club. Phone: 708) 439-4727.
2-3: CalScape Expo '95, Irvine (Calif.) Marriott Hotel. Phone: Mary Golden, (619) 723-9910.
5: Tampa Bay Horticultural Trade Show, Tampa ( Fla.) Convention Center. Phone: Tampa Bay Wholesale Growers, (813) 960-1457.
6-8: Massachusetts Turf Conference, Springfield, Mass. Phone: (413) 549-5295.
11-14: Canadian Turfgrass Conference & Trade Show, Ottawa Congress Center. Ottawa; Ontario, Canada. Phone: Canadian Golf Course Superintendents Assn., (905) 602-8873.
14: Minnesota Sports Turf Managers Association meeting. Phone: Mike McDonald, (612) 828-6525.
15-16: Reinders Turf Conference, Waukesha (Wis.) Expo Center. Phone: Ed Devinger, (414) 786-3301.
17: Turf Management Seminar, El Cajon Community Center. Phone: (619) 670-1980 x262.
24-26: Student Career Days, sponsored by Associated Landscape Contractors of America, North Metro Technical Institute, Acworth, Ga. Phone: (404) 975-4030.

Taking issue with editor's environmental perspective
To the editor:

With deference to your editorial piece in the December 1994 issue (p.1, "As We See It"), I am moved to respond as follows:

1) Contrary to your opinion regarding "oppressive government," laws governing the manufacture, sale and use of pesticides were in direct concern for an environment polluted with man-made toxic chemicals.

2) Thanks to EPA, FIFRA and OSHA, this country is on its way to protect us humans and the rest of God's creatures from being poisoned by our own hands.

3) The real entrepreneurs in this world are those individuals who accept our mistakes and strive to find remedies for our problems.

4) You must certainly believe in Santa Clause [sic.] if you think that the "market will regulate itself." If that were true, we wouldn't need half the laws on the books to protect the public from greedy individuals.

5) I do not want to renew my subscription.

Richard C. Fry
Transylvania County (N.C.) Parks & Recreation

Correcting reference to his company name
To the editor:

I enjoyed your article on Tom Delaney, "Lawn Care Industry Person of the Year." I have worked with Tom concerning lawn care issues and he is very deserving of the award.

I would have liked to frame the list of past recipients since our past owner/president, the late Jim Marria, was a past winner. I can't do this, though, because you have our company wrong. We are Perma-Green Lawn Care Co., one of the 15 largest lawn care companies in the U.S. We are a 10-year-plus member of the PLCAA, but we do not build and sell spray equipment. Perma-Green Supreme is a completely different company.

Jim Marria needs to be remembered as the founder of our company.

Ben Miller
Perma-Green Boise, Ida.

(We stand corrected.—Ed.)

Says watch out for invasive perennials
To the editor:

This note is in reference to an article that appeared in your magazine in August 1994 on perennial plants. The information appeared on page 35 and apparently was taken from a book called Garden Design Ideas.

Under a listing for summer perennial favorites tolerating wet soil, purple lossestrife (Lythrum salicaria) is mentioned. Although there is a notation that plant is invasive, there is no mention of the fact that it is banned or about to be banned in 13 states due to the fact that it crowds out all other plants when it becomes established in wetlands.

Some plant varieties are currently being sold that are supposed to be sterile, but trials with these plants have shown that, in fact, very few of them are sterile. Thus, it is best not to promote or sell this invasive, non-native perennial.

It would be educational for your readers if your magazine could present an article about this plant and other plants that have "escaped" the yard to become a problem in the wild.

Catherine A. Bergens
Indiana Dept. Natural Resources
Indianapolis, Ind.