

TECHNOLOGY

Robot lawnmower: just around the corner?

Dr. Ernest Hall spent years calling equipment companies trying to convince them to manufacture his robot lawn mower. This year, companies are calling him.

Hall, director of the Center for Robotics Research at the University of Cincinnati, has turned an 11-hp Snapper riding mower into a robot mower. Now, Snapper is among several companies vying to manufacture the space age mower.

"I'm negotiating with six companies," Hall says. "Snapper is the one I've talked to the longest and in the most detail."

But Hall also mentions Honda as a possible manufacturer. "It's a product that's been developed in America, but the Japanese may be more interested in manufacturing it," he says.

Hall describes another company looking into the mower as "a major corporation in the United States which works with race cars and challenging technological things."

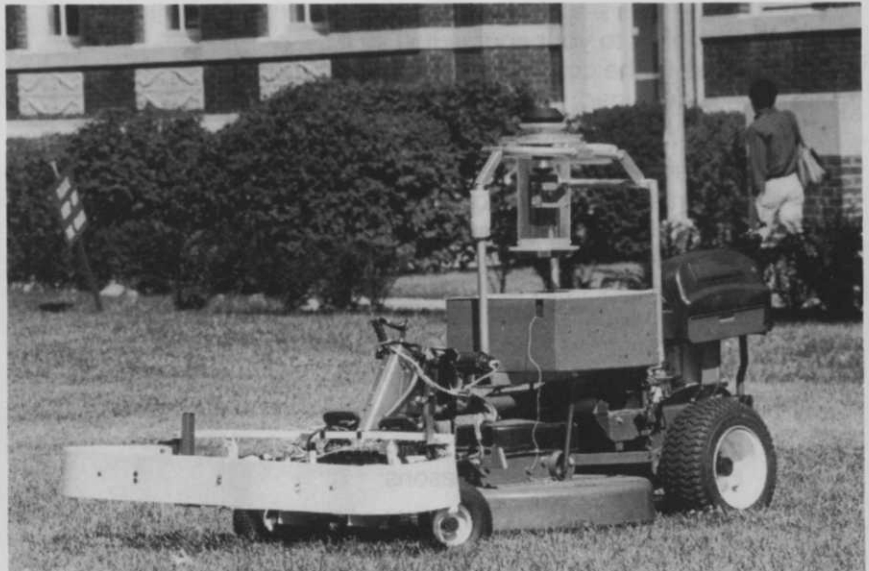
The mower could be ready to market in two or three years. "But the possible manufacturers have a lot of questions."

One new question, which seems to be choking many industries, is liability. Although, Hall says, the robot lawn mower is potentially safer than today's mowers, the issue cannot be ignored.

Already, people have won cases against mower manufacturers despite the fact that the consumer was misusing the product. In one case, someone was using a push mower as a hedge trimmer. In another, a man died of a heart attack trying to start a mower with a clogged system.

"If you were worried all the time, nobody would do anything," Hall says.

The mower is safer, primarily because it decreases human contact with the machine. Lawn mower acci-



The robot mower: a niche in the Green Industry's future?

dents hurt more than 50,000 Americans annually.

It works in one of three ways: remote control (a human would watch the mower and guide it); trainable mode (a computer program would teach the mower boundaries of a lawn); fully automatic mode (the mower would be able to detect boundaries, flower beds, trees).

For added safety, the mower features a warning light and safety bumper which stops when the machine encounters an object; sonar detectors which locate and avoid stationary and moving objects; and an omni-directional vision system which allows the robot to avoid obstacles and monitor progress while cutting the lawn.

Studies have shown the robot mower to be economical for either domestic or professional use. It is ideal for an older or handicapped consumer who can't do strenuous work. With homeowner use, the mower pays for

itself in three years.

A lawn care company which mows less than 100 acres weekly will pay for it in a year and a half. And, in large commercial use such as a municipal airport or highway, it can be paid off in less than a year.

Lawn care employees shouldn't be threatened by the robot. Hall says the machine will free up people to work on other areas of the landscape. Besides that, it will create a cottage industry for people to program or repair the robots.

The robot lawnmower is only the beginning. "I see people having not only the robot lawnmower, but indoor robots such as a vacuum cleaner," Hall says. The vision is reminiscent of the old *Jetsons* cartoon.

The first step is for Hall to secure a deal with a manufacturer who can make the product economically. "As Henry Ford once said: 'If I can make it cheap enough for people to afford, I'll make a fortune.'"

SURVEY

Water management a problem out west

Although water usage is not considered the primary problem faced by landscape managers in Southern California, it rates as "very important."

According to Janet Hartin, Cooperative Extension agent at the Univer-

sity of California, a survey taken at a horticultural short course noted that over-watering was most often cited as the major water-related problem.

"Water management, water quality programs and irrigation system de-

sign problems were frequently cited second water-related problems," says Hartin. "And almost all respondents said there was not sufficient information on water conservation available."

LANDSCAPING

Royal garden challenge met by Ohio landscaper

When Jordan's King Hussein comes to town, Cleveland hustles.

The Mideast ruler paid a visit in June to the reknowned Cleveland Clinic for his annual check-up.

Waiting for him at the clinic was a beautifully-landscaped garden featuring some 5,000 flowers, myriad ground cover, manicured Kentucky bluegrass, some 30 newly-planted trees, and yes, a flag of Jordan painted into a garden slope.

What the King didn't know was that two weeks prior to his visit, the area was nothing but a construction area parking lot (an addition was being built) with the usual features—heavy equipment, dirt, and more dirt.

That was before Cavotta Landscapers Inc. of Cleveland took over.

The way the schedule worked: the concrete contractor had two days to lay sidewalks and curbs; Cavotta had four days to spread the topsoil, install an irrigation system, and plant the flowers, groundcover, sod (1,200 yards), and trees.

"They gave us a blueprint," vice-president Phil Cavotta recalls, "but everyone purchases their materials in April and May so there was nothing available. We had to summer-dig material."

With Cavotta frantically "pulling strings" to secure materials, site supervisor Kathy Trhlin-Russ barking signals, and a crew of sometimes as many as 18 working nearly round-the-clock, the challenge was met even though everything that was planted had to be checked by ever-present Secret Service people.

By June 8, one day before the King's visit, the garden was complete. "The big thing was the coordination of everything. It took a big effort on the part of everyone who was involved," says Cavotta. "I even pulled my dad out of retirement for this job."

It wasn't a small job. The garden area measures some 6,000 sq. ft.



Part of the 6,000 sq. ft. garden prepared in four days by Cleveland's Cavotta Landscapers Inc. in preparation for a visit by King Hussein of Jordan. Upper left inset is Phil Cavotta.

When things "slow" down, Cavotta maintains the 80 acres of the Cleveland Clinic "campus," with as many as 18 workers on-site even in the winter months. "It's like an airport here. You can't shut it down," he says.

SEED

Pickseed introduces Bronco bluegrass

Bronco Kentucky bluegrass is making its debut this month as a turfgrass developed specifically as a mix component with turf-type tall fescues.

Dr. Jerry Pepin, director of research at Pickseed West Inc., developer of the grass, says Bronco has good overall turf quality, heat tolerance, and disease resistance.

Bronco features a leaf width of 3.2 mm, a vigorous rhizome system that facilitates active spreading, and a moderate tiller density to create less competition with tall fescues.

Pepin recommends a tall fescue/Kentucky bluegrass mixing in 95-5 to 90-10 mix ratios. The mix is recommended for both professional and home lawn use.



Baseball field clinic

Chief groundskeeper Roger Bossard explains maintenance of infield and skinned areas of Comiskey Park's baseball field during a clinic held July 23, 1986. The clinic was co-sponsored by the Chicago White Sox and the International Minerals and Chemicals Co. More than 100 Chicago-area athletic field managers from schools, colleges and parks attended the one-day seminar.