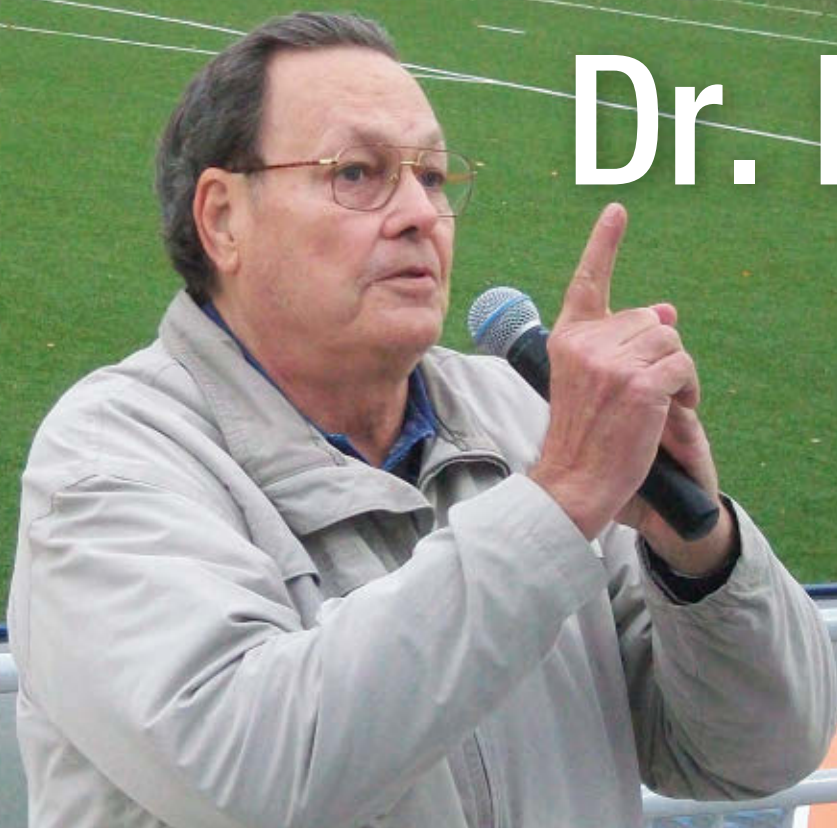


Dr. Beard's

Dr. James Beard looks to professional turf's future, and back at its humble beginnings.

BY RON HALL



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Crystal Ball

"The closer you get to perfection, the more obvious the imperfections and the more difficult and costly the improvements," says Dr. James B. Beard, director and chief scientist of the International Sports Turf Institute.

In other words, superintendents, try as you might, you'll never be able to give golfers perfect playing conditions. That doesn't mean you shouldn't keep trying, says Beard, still vigorously authoritative in his fifth decade of researching, writing and lecturing about turfgrass and its management. (Of the three stages of life — youth, middle age and "hey,

you're looking good" — Beard jokes that he's now in the third.)

Recently, Beard, addressing more than 1,000 sports turf managers, briefly outlined the history of the turfgrass industry — from the era when grazing animals and their manure were counted on to mow and fertilize greenswards to today's mechanized, scientific management — as a preamble to sharing his vision of the industry's future.

In a sense, his address at the Sports Turf Managers Association Conference in Austin, Texas, validated a similar presentation he gave to the same group 16 years previously. In fact, Beard, reaching into a sport coat pocket, brandished the very notes he used that day. That

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Dr. James B. Beard, director and chief scientist of the International Sports Turf Institute, addresses the audience at the Sports Turf Managers Association Conference in Austin, Texas.

PHOTO BY: RON HALL



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Future forecast

Dr. Beard's crystal ball says,
"more biologicals, less chemicals."



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many of his 1995 predictions came true did not surprise the audience; many of the attendees also perhaps secretly hoped that they and the turfgrass industry — with all its challenges — will be around to hear another similar presentation from Beard a decade or more hence.

But, before we get to the meat of Beard's talk, trends that will shape the future of turfgrass, let's note some of the highlights of the history of turfgrass management that he shared:

- The history of turfgrass for sport purposes goes back to at least the 1200s with historical mentions of lawn bowling and to the 1300s with cricket. Using stone and later iron implements to roll and smooth these areas probably constituted the first cultural practice, while mowing came much later.

- Using a manually cranked wooden cleaner, Orlando M. Scott developed weed-free seed in the 1880s, a huge breakthrough, said Beard. Scott also pioneered seed testing.

- Manure was used to fertilize turfgrass

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until cars replaced horses, reducing the amount of available manure, and synthetically produced fertilizers began gaining ascendancy.

■ Turf irrigation followed a somewhat similar path with hose-end fixed sprinklers giving way to traveling rotary sprinklers. Pop-up rotary sprinklers appeared on scene during the 1930s.

■ Many of the substances used to control turfgrass pests prior to and including the WWII era were pretty nasty, he related. They included sulfuric acid, sodium arsenate, Bordeaux mix and mercurous chloride.

■ With the introduction of phenoxy herbicides and chlorinated hydrocarbon insecticides, the growing realization of the importance of core cultivation (the first coring unit is thought to have been developed by Tom Mascaro in 1946) and the development of Merion Kentucky bluegrass and Tifway bermudagrass in the 1950s, Beard said the decade saw major changes in turf management.

Future of the industry

The more recent history of the turfgrass industry, at least the last 50 years, parallels Beard's involvement with it. In address-

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Future forecast

Continued from page 31

ing turf managers 16 years ago he predicted the industry would enter the computer age, that there would be continued turfgrass cultivar and equipment improvements and there would be increased emphasis on employee training and safety. He even predicted there would be growing public concern over industry pesticide and fertilizer use.

What does Beard see in the industry's future from this point forward?

The trend to reduce chemical use is real. "Biologicals are coming," he said, pointing out the major companies are investing in their development. In a related matter, he predicted that pest control products will target specific pests and be used correctively rather than preventatively. Pest scouting and predictive modeling will grow in importance with an eye to earlier diagnosis of pest problems. Eventually, genetically modified cultivars will be developed to reduce disease pressure.

Beard predicted that turf managers will reduce nitrogen rates while using more controlled-release carriers. The practice of measuring leaf growth rate in selecting nitrogen rates and timing will become more important. For sports turf, in particular, he stressed that potassium is necessary to help turfgrass resist traffic stress, meaning that turf managers will be attempting to maintain adequate potassium tissue levels with light, frequent applications. You will have to be able to document and defend your use of fertilizers, as well, Beard said.

Advances in turfgrass breeding will be a big aid to turf managers, said Beard, including the development of cool-season grasses that grow an extra four or five weeks into fall and bermudagrasses that can be sustained further north. Even so, he said that cyclical warm/cold cycles every 11 or 25 years will challenge both trends. One certainty, he added, will be the development of cultivars with increased tillering, enhanced rootzone water retention and reduced ET rates.

In probably his boldest prediction, Beard said digital pest recognition systems are in turf's future. They might involve a sensor and computer on the front of a sprayer unit that can identify specific weeds and spot-treat the weed with correct herbicide. "It's being worked on and it's going to happen," he said. ■

Ron Hall, Golfdom editor-at-large, has been covering the green industry for 30 years.





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