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Major strides expected in turf industry by year 2000

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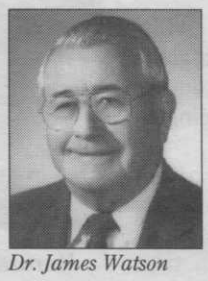
— Dr. James Watson

By MARK LESLIE

COLUMBUS, Ohio — Green industry researchers are on the verge of major advances in biocontrol agents, bioengineered grasses and compost, while "many of the same concerns we have today will still be with us in the year 2000," according to Dr. James Watson.

Speaking at the Ohio Turfgrass Conference and Show here Dec. 7, Watson said: "Many of the good things that are going to happen ... will not happen until after the Year 2000. I think we will have some solutions to some of our concerns, and I anticipate we will have new products that will mitigate some of the more serious concerns of today."

Composts and other organic-based materials — what Watson calls biocontrol agents — will be key players in the future fight against turfgrass diseases, especially in an era when chemical use is seen declining.



Dr. James Watson

"For example," he said, "antagonistic organisms have been isolated from compost and field areas that attack or at least mitigate the virulence of pathogens that cause dollar spot, brown patch and other organisms. Organisms have also been found that are antagonistic to root diseases."

Besides biocontrol agents, he also cited beneficial nematodes, parasitic wasps, and bacteria that attack insects as showing "considerable promise."

The problem of creating an environment that will ensure adequate supplies of these biocontrols and favorable organisms has not been solved. "But it certainly will be," Watson predicted.

BIOENGINEERING A FOCAL POINT

Grasses that contain fungi, endophytes, enzymes and other entities that repel insects also will minimize the use of pesticides, he said.

"Expect to see bioengineered grasses — probably well beyond 2000 but they are certainly much closer today then they were even a year ago. This is very rapidly developing technology," Watson said.

With this technology, genes containing favorable characteristics of one type of grass could be infused into another type and transmitted onto successive generations.

"That may sound far-fetched, but by the year 2000 or 2025, don't be surprised to see that type of plant available," he added. "We are talking about genes that will impart immunity to diseases, resistance to insects, drought tolerance, cold hardiness and many other favorable characteristics."

Rutgers University researchers are already working on gene mapping of turfgrass — a vital, but slow, tedious and costly process which has been completed on rice, corn and tomatoes.

NON-POTABLE WATER

Watson said the green industry must also meet the challenge of using effluent and storm water to a much greater extent.

"Imagine how well-off we would be for the next several years if we could have conserved some of the waters that fell on the Midwest [in 1993]," he said.

The amount and frequency of application of soluble fertilizers and pesticides will be reduced, Watson forecast, citing three reasons:

- "Integrated pest management will be more widely accepted by 2000. Developers, architects, facility managers will be much more adept in this area and they will be able to persuade owners a few pesticides are acceptable."
- "Already, plant breeders are developing grasses that do not require the high-water and high-fertility regimes that were the case a few years ago."
- "Natural or organic-based fertilizers will be more widely used."

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Watson: Green industry failures evoke need to change

COLUMBUS, Ohio — Dr. James Watson, president of the International Turfgrass Society and former vice president of The Toro Co., admonished colleagues in the green industry in his talk at the Ohio Turfgrass Conference and Show for not informing the public about the benefits and shortcomings of turfgrass.

"Be assured, the green industry will be severely taxed and challenged the remainder of this century and beyond," Watson said "Researchers, professionals, practitioners, extension personnel, consultants and all others who purvey information will be challenged in the political, ethical, environmental, safety and standards arenas.

"Why? Because of something I think is wrong with our industry. Too often we fail in construction techniques. Too often we don't get the right kinds of seedbed materials.

"We use wrong grasses. Perhaps our management procedures and techniques are not always the best. But are these the areas that are wrong, or is it simply the manner in which we use or are told to use various factors?

"I happen to think it may be our publicity campaigns are not the best."

He added: "Why, for example, are the experts in the green industry not recognized, not perceived as authorities and often overridden in decisions that can make of break turfgrass consulting?

"Why are the knowledgeable experts not called before problems arise on new or renovated sports fields? Why, when the turfgrass industry has new and improved grasses, procedures for specifying soil texture and techniques in construction and establishment, are managers still blamed when grass is lost?"

With new maintenance equipment, supplies and materials, and more knowledge about cultural practices, grass should not die, Watson said.

"One major factor may be the economics — not the economics associated with turf management but with facility management. Most managers and investors have to generate a return on their investment. But whether or not excuses are valid, "they adversely reflect on the green industry, often because the industry has not done a good job of explaining that there are limitations to turfgrass areas. We talk only to ourselves, not to the public," he said.

Changes by 2000

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Among Watson's predictions for the industry are:

- Increased use of native grasses like buffalograss.
- Superior salt grasses that will tolerate 7,000 to 8,000 parts per million of salt. "That will permit us to use brackish water supplies. These grasses have substantial promise, especially in the West and Southwest."
- A proliferation of organic-based fertilizers.
- New laws, "ostensibly to protect the environment. And you must be aware of them and take steps to make certain you are not prohibited from using water that might even b on your golf courses.

"Some of these regulations may be detrimental. Methyl bromide is being considered to be taken off the market. Yet 90 percent of methyl bromide that goes into the atmosphere comes from the ocean. Man's contribution is minute, like a grain of sand on the beach. Yet, they may take it away from those who need it."

Urging the industry to be active and outspoken, Watson said: "Green industry facilities are an integral part of our present and future lifestyle and needs. We must not let this future be decided by political entities, environmental extremists, or anyone not familiar with the green industry. They must not dictate our future."

Sweda takes office

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by the year 2000.

Citing the many professors retiring from other universities, he said, "Ohio State has a golden opportunity to become the leader in turfgrass research."

"Research is our key number-one priority," he said. "We're funding the new biotechnology center [at OSU]. They're going to genetically alter a plant and try to develop a drought-tolerant plant... Maybe in the near future we'll have our Buckeye grass.

Sweda, who left Beechmont Country Club in Cleveland to join Columbia Hills CC last spring, said he views his service as president as returning "what somebody gave me 26 years ago. Somebody gave me a wealth of knowledge and got me started. I want to give it back."