

**Technology**, communications, our changing society-all will have an impact on 'the keeping of the green.'

As the decades pass, our pace of life is accelerating, almost exponentially. Consider these trends in technology and communications:

\*\*Just 150 years ago, it took weeks for news to travel from coast to coast via the Pony Express. About 100 years ago, it took minutes, via the Marconi wireless. But in 1951, on the television show "See It Now," Edward R. Murrow visually linked the East and West coasts for the first time. Today, physicists can see live pictures from deep space, millions of miles away.

\*\*Just 150 years ago, the fastest speed reached by man was a mere 36 miles per

hour, in a steam locomotive. In 1947, Col. Chuck Yeager reached a speed of 700 mph in an experimental X-1 jet plane. In 1969, the Apollo 10 space capsule plummeted back to Earth, from the moon, at a speed of 24,791 mph.

Following the trend-In the 1990s and beyond, golf course maintenance promises to follow this trend: technology and communications will explode, and superintendents will have to be more knowledgeable than ever before.

"Golf course superintendents will have to have an incredible love of the business because of the things they'll be subjected to," says Tim Hiers of Collier's Reserve, Naples, Fla. He thinks efficiency will be the key to the golf course of the future.

AUTO 60 mph AUTO 300 mph "Efficiency in water use, pesticide use, integrated pest management," he says. "And it's not just going to be the superintendent-it's going to be the secretaries and dust broom guys helping out, too."

Hiers also thinks that:

1) The superintendent will have to be a better time manager and a better personnel manager because of the competition for good employees.

2) More "fuel-efficient and lighter-weight equipment" will be developed.

3) Community relations will play an even bigger role in the job description.

"I see the superintendent getting involved in the local community defending golf courses. Even today, we're starting to walk elementary kids through the courses to show how we're helping the environment."

Techno-golf-Dr. Jeff Nus of the Golf Course Superintendents Association of America sees a boom in technology that will show the way toward "micro-environment manipulation."

"The level of sophistication in equipment is increasing by leaps and bounds," Nus notes.

"You'll see equipment used to manipulate the environment, specifically to grow bentgrass outside its normal environment." Fans that can circulate either warm or cool air, as needed, and soil warming systems will take the forefront, Nus believes. In the Midwest, for instance, these innovationswhich are already being used in the South-may even lengthen the golfing season past the

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first hard frost.

"The technology is being developed, and it's not just in the mowing and equipment areas," Nus admits.

A short list—Bill Roberts, a past president of the GCSAA, is superintendent at the Lochmoor Club in Grosse Pointe Woods, Mich. He believes these trends may soon have an impact on course maintenance:

1) Experts predict that, by 2000, more than two-thirds of our entry-level employees will be minorities, immigrants and women.

2) The playing clientele will also change: by 2000, demographers estimate that the over-65 population will be 34.9 million, double that of 1960.

**3)** As the decade wears on, more professional superintendents will feel the need to embrace the Computer Age, to cope with the volume of information they must process.

4) New technology will give us new products: water-soluble packaging, water-jet aerifiers, turf varieties that need less water and are more resistant to pests, and disease diagnostic kits.

**5)** There will be a trend toward globalization of golf course maintenance, meaning an increasing opportunity for American superintendents to work abroad.

6) Supers will have the opportunity—even the responsibility—to impact their legislators: developing regulatory awareness, helping to communicate environmental impacts, and achieving regulatory compliance.

"Farsighted superintendents who monitor such trends and prepare thoughtfully for tomorrow will be in the best possible position, for themselves and for their facilities," Roberts observes.

**Regionality**—More specifically, here are some regional trends in golf course maintenance identified by the National Golf Foundation:

**1)** In the Southeast, subsurface drainage systems have become standard.

2) In the Midwest and

Northwest, public facilities are moving away from bluegrass and ryegrass and opting instead for bentgrass on their fairways and tees.

3) In the Northwest, superintendents frequently use sand topdressing programs for fairways to create better surface runoff and thereby improve turfgrass and playing conditions.

4) In the Southwest, most golf facilities being built have continuous cart paths for better traffic control and to save wear-and-tear on the course.

Finally, Hiers thinks, "You're going to see smarter placement of—and less—grass. What I mean by that is that the golf course will fit a typical golfer's game, wider landing areas for 'relaxed target golf' rather than the wide, long fairways we have today."

-Jerry Roche

## Seeing the future at La Quinta resort

• Communications, water and the environment, and safety. These are the future of golf course management, according to superintendent Michael Tellier of La Quinta, (Calif.) Hotel Golf and Tennis Resort.

Over the five years that Tellier has been superintendent, there have been many changes., "I'm more involved with communications now," he says. "Because we have a year-round membership and a constant flow of activity connected with the report itself, I work closely with the pros on staff and with the to mament directors, both of the hotel and of the event. It's recessary to interact in both the planning and execution stages, nake sure the tournament is carried out the way the directors out it to be, and that the condition of the course is consistent with the skill level of the players. The communication helps us deliver what is expected.

"Agronomically, water management is an increasing issue. We're looking at computerized irrigation to increase efficiency and cut costs. We're now operating from individual field satel-



Michael Tellier of La Quinta says computers and safety issues, too, are very much in the future of the golf course superintendent's job.

lites so it's hard to control the system. Computerized irrigation will allow us to save water, make better use of that we do use, and it'll save on pumping costs.

"Overall, environmental issues have become more of a factor. Integrated Pest Management (IPM) has always been a part of my program, so basically, we've made some refinements there. The major changes when you talk about the environment are with compliance, regulatory issues, and ever-increasing paperwork. There are lots of regulations to comply with. You continued on page 12

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must (also) keep accurate, complete records on all of them.

"Safety has also become a key issue. Five years ago, we weren't doing much on safety. Now we spend more time with initial training of employees and we have weekly safety classes. There's a safety director for the entire complex who oversees the program. We have 80+ topics identified, and these topics are tailored to meet the needs of the individual departments."

Tellier is responsible for preparing and conducting the meetings with his staff. "We try to rotate the topics and present them in different ways," he says. "We bring in medical consultants, mechanics, manufacturing people, and use prepared videos. The videos range from proper operation of equipment to the use of respirators and pesticide handling."

He also takes every opportunity to serve as hands-on safety trainer for his crews in the field.

"Equipment has come a long way in the last five years," Tellier adds. "The lightweight mowing options; the trim mowers and the popularity of grooming attachments give superintendents more options and help get the job done better, in a shorter time."

One of Tellier's three courses, The Dunes Course, was host to the John Deere Team Championship Golf Tournament two months ago. With 30 five-person teams playing in the modified scramble event, and other guests as well, Tellier had 230+ rounds per day for the one day of practice and two days of competition. The following week, the PGA Tour Qualifying School was held on the same course.

"With everything that's happened in the last five years, it's going to be exciting to see what the future will bring," Tellier concludes.

-This article was written by Suz Trusty of Trusty & Associates, a consultant to the horticulture trade, in Council Bluffs, Iowa.



TURF ROLLING: FAST GREENS WITHOUT TURF DAMAGE • According to Pat O'Brien of the U.S.G.A. Green Section, rolling greens may become popular in the near future.

"Rolling has been pretty much abandoned because we have such good green mowing equipment," he says. But the demand for fast greens—especially for professional tournament play—has forced superintendents to mow low and thus place so much stress on the turfgrass plant, that rolling might be making a comeback.

"Just about every PGA Tour course rolls its greens now," O'Brien notes. Baltusrol, for instance (site of the 1993 U.S. Open), had pre-roll stimpmeter readings of about 8'3". After they were rolled with a Salsco unit, they stimped out at 11'5".

"The stimpmeter is the main reason for the demand for fast greens," O'Brien observes. "And the roller will increase green speed without having to mow lower."

Rolling will also help the green's putting consistency, eliminating footprints, divots, spike marks, diseases, weeds and dry spots, especially in the "lumpy donut," that one- to 12-foot radius around the hole. Putts can "hiccup" when they hit lumps in that area, where the ball is rolling slowest and most likely to be influenced.

O'Brien suggests that superintendents who are interested in rolling greens should experiment with it. The best time to roll is before special tournaments or early in the golfing season when the greens are bumpier. Supers should *not* roll, however, after irrigation or rainfall, after topdressing or fertilization.

Two manufacturers of greens rollers include Salsco (1-203-271-1682) and Cultural Turf Technologies (1-800-793-7655)

—J.R.