



New Zealand

Turfgrass Management in An Incredible Land

by WM. H. BENGUEFIELD

"**H**AERE MAI" they call, and you are welcomed to New Zealand!

When you disembark the 14-hour flight from Los Angeles and arrive in Auckland, you are not only in another day and another season, but also in another world. New Zealand is a land of unbelievable beauty and its 3½ million people are sports enthusiasts, participants and doers. Someone will soon tell you there are also 60 million "four-legged greenkeepers"; this an affectionate referral to their most important agricultural commodity — sheep!

Through the invitation of President Stewart Robinson of The New Zealand Turf Culture Institute, the opportunity to tour, lecture, listen and learn of the turf culture practices in this incredible country was extended last February. The true value of sharing ideas and information was re-emphasized and reinforced. It is undeniable that turfgrass management today is a world-wide profession.

No turfgrass agronomist will visit New Zealand without soon learning that there are two schools of thought regarding soil pH levels. The "acid era" still has its adherents. They believe a pH range between 4.1 and 5.0 is right and proper for putting greens and similar areas.

Then there are others who feel, just as strongly, that the range should be at least over 5.0 and preferably nearer 6.5. We in the United States passed through the so-called "acid era" in the 1930's and, since that time, have generally agreed to pH ranges above 6.0 as acceptable.

Who is right? Convincing arguments can be presented by both sides. Those believing in lower pH ranges point proudly (and correctly) to a marked absence of *Poa annua* in their New Zealand browntop bentgrass greens. There are fewer problems from earthworms as well. In fact, many

New Zealand browntop bentgrass greens are remarkable for their tight, wear-resistant turf, narrow-bladed grass with exceptional putting qualities!

To the contrary, those believing in higher pH values point proudly (and correctly) to the fact that thatch accumulation is far less a problem, water infiltration greatly improved and turf is, overall, greener, healthier and far more able to survive droughty, adverse weather conditions!

Is there some middle ground in this argument of soil pH levels? Perhaps our New Zealand friends, in their dedication to agricultural fundamentals, have something for us to ponder. Perhaps a soil pH range between 5.5 and 6.0 is of considerable benefit to bentgrass production when compared with *Poa annua* development (assuming other nutritional needs are in adequate supply). Dr. Roy Goss, Washington State University, has recently shown the value of sulfur applications in reducing *Poa annua* invasion in bentgrass turf (March, 1978, issue of the *Record*). Retired Superintendent Art Anderson, Brae Burn Country Club, Massachusetts, has long advocated such a pH range for greens. With modern equipment and modern chemicals, the old problems of thatch, insects, weeds and disease may be more easily tolerated at the 5.5 to 6.0 pH range today. It is something for us to think about.

RESEARCH IN NEW ZEALAND

Whether in their country or ours, meaningful research remains at the heart of all progress in turfgrass management. There is no substitute for it!

At the Department of Scientific & Industrial Research (DSIR) in Palmerston North, Dr. Peter Evans heads up a most capable turfgrass research team. This governmental agency works closely



(Above) A typical countryside golf club. Fence protects greens from four-legged greenkeepers.

(Left) *Cotula* was once a weed. Now it's used on bowling greens.



browntop (*Agrostis tenuis*) now underway. This grass is naturally found over the hills, fields and fence lines of New Zealand. Potential for improvement seems unlimited and, if three or four good adaptable, seeded varieties become commercially available (as with creeping bentgrasses in the United States), the entire turfgrass world may one day beat a path to the South Pacific and New Zealand's front door.

Other research is underway with soil pH values, various grass species, nutritional requirements, physical properties of sand and soils, and *Poa annua* and other weed controls.

To bring new research and to share improved cultural practices with those in the field, The New Zealand Turf Culture Institute maintains a staff of seven extension agronomists. They visit and send reports to supporting clubs similar to USGA Green Section agronomists. Their financial base is supplied by golf, bowling and other sports turf interests. Each club contributes according to the number of members on its roll.

New Zealand is a nation having more golf courses per capita than any other country in the world. While visiting Otago Golf Club in Dunedin, I had the great pleasure of meeting Greenkeeper John Dickson and one of the senior members of his club at Otago, a Mr. McClintock. Otago Golf Club incidentally is the second oldest club in New Zealand. It crowned its first champion in 1872. McClintock recalled an old Scottish story relating

with Stewart Robinson and the staff of The New Zealand Turf Culture Institute (a non-profit and non-governmental agency). The Institute staff visits all sports turf interests (golf, lawn bowling, cricket, football, rugby, croquet, etc.) who support The Institute through annual subscriptions. A high level of scientific extension teaching and research is thereby developed and maintained.

One of the most exciting DSIR research efforts lies in the selection and breeding of New Zealand

to finances. "In this world," he said, "You get nothing for nothing — and very little for sixpence!" The New Zealanders are investing in better turf through their Turf Culture Institute.

GOLF — A WINTER SPORT?

It may be difficult for an American to understand, but golf in New Zealand is considered a "winter sport!" Someone said it is traditional. But winter is also the time of rains and, until recently, the brown, dry fairways of summer were of little concern to most golfers. Times are changing. Irrigation improvements are being made and there are now perhaps six courses with fully automatic irrigation systems and ever increasing numbers of quick-coupler installations especially for greens and tees.

Improved golf course irrigation is essential; it is the first step toward improving year-round turfgrass quality. In fact, if one had to predict the future for golf turf in New Zealand, it would have to be an improved and extended irrigation system. But the New Zealanders know how to manage what irrigation they presently have. February is summertime below the equator, and I never saw a wet green or a wet golf course during the entire trip!

MONEY, MANPOWER & EQUIPMENT

New Zealand was settled largely by Scots during the mid 1880s, and thriftiness, even today, is not unknown. Annual golf club membership dues are generally under \$100, with the most exclusive clubs charging no more than \$150 a year! Clubhouses are not ornate palaces, nor are they heavily staffed with employees. There is always the Club Secretary and one, perhaps two or three others involved in the kitchen, bar or elsewhere in the entire clubhouse. Not every golf club employs a full-time golf professional. But the clubhouse traditionally has a picture window view of the final hole and is comfortable, functional and clean. Most memberships willingly accept many of the responsibilities we delegate to hired hands. For example, if a country golf club is holding a weekend tournament, the ladies will prepare and furnish the food. Golfing memberships are comprised mostly of those who enjoy playing the game; other social considerations seem less important.

Because of low dues structures, manpower and equipment on the golf course is considerably less than in the United States. Nevertheless, the more experienced golf course superintendents receive good salaries, which are far above the national norm. The average number of golf course workers is perhaps two or three for an 18-hole course. The highest number was eight! Super grooming and super mowing practices are not always found. Indeed, if there is one turf management requirement which would materially improve playing qualities, it would be increased mowing schedules. If overall maintenance and course conditioning is to improve, the golfing membership must be willing to accept higher dues for larger staffs for golf course maintenance.

Because it is an island and is basically an agricultural nation, New Zealand's import duties on golf course maintenance equipment are high. For example, a triplex putting green mower manufactured in the United States will cost \$12,000! As a result, the New Zealand greenkeeper (the title he prefers) has become a tremendously resourceful and inventive fellow. Since his club cannot always afford the equipment he needs, more than likely he invents or builds his own; shades of our country 30 years ago! I saw some very good homemade triplex putting green mowers, direct hydraulic drive fairway mowers, scooters, sprayers, top-dressers, etc. Necessity, it seems, is still the mother of invention.

OTHER TURFGRASS INTERESTS

New Zealand golfers are not alone in their interest in better sports playing grounds. Never have we seen a more enthusiastic fraternity of sportsmen than the lawn bowlers of New Zealand! All ages are represented, and their spirit toward this game is infectious. Women are active bowlers through the summer days while the men, when work is over, drop by their club for a few games usually before but sometimes after dinner. Annual dues for bowling club membership ranges from \$12 to \$20 a year and there are thousands of bowlers throughout New Zealand.

The lawn bowler is interested, even to a greater degree than golfers, in fast, hard-playing surfaces. Turfgrasses do not always provide ideal bowling conditions, and over 25 years ago, bowlers on the South Island found a strange weed invading some of their greens. It was a low-growing, broadleaf native plant called *Cotula* and proved to be excellent for bowling purposes. Several other *Cotula* varieties have been found over the years and are preferred by many bowlers today. Indeed, *Cotula* is "a weed that has found its place!"

The cricket and rugby fields of New Zealand are usually shared, and their seasons overlap (not unlike baseball and football in the United States). The two games have entirely different playing requirements, and yet the turfgrass manager is expected to affect the change almost overnight. He strives mightily usually, I think, successfully, but it is a difficult assignment. More research and implementation of sound turf management procedures in irrigation, fertilization, soil studies, etc. will surely help.

A FINAL THOUGHT

Americans and New Zealanders have a natural bond, not only in language and history, but also in an attraction to all outdoor sports. The New Zealanders are exceptional agriculturists and grow very good turf for sports use. Furthermore, they are interested in growing it better. These are wonderfully friendly people living in an incredible land. And once you have traveled and seen their remarkable country, their expression "Good as Gold" will take on new meaning and forever remind you of the wonders of New Zealand.