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# Golfdom

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The ninth at Cypress Point (Calif.) lauded as one of the world's greatest courses.

Dr. MacKenzie, who designed this course, is shooting

# SPENDING Mental Effort to SAVE Manual Costs

By DR. A. MacKENZIE

THERE are many considerations that come into play in the upkeep cost of golf courses.

The most important factor is the quality of the design and construction of the original layout of the course. A badly constructed course gives rise to constant expense in upkeep and reconstruction. I recently advised on a golf course which had 50 greens during the last few years. Even now the committee realizes the course could be still further improved and contemplated further alterations.

The most important consideration in lessening the cost of maintenance is to obtain finality in the design and construction of the course. The energies of the green-keeper and his staff can then be devoted to maintaining what is already as perfect as the local conditions of terrain and soil allow.

### Building to Stay Built

It is frequently stated that all golf courses require alterations and improvements from time to time. This is untrue. On the contrary, if a golf course requires extensive alterations it is an indication of mistakes in the original design or construction.

The old course at St. Andrew's is a classical example. It was the best course in the world in the days of the feather, the guttie and the Haskell ball, and today, according to Mr. Bobby Jones, is by far the most interesting and pleasurable of all the courses he has ever played. It has remained unaltered for more than 50 years. There is more than one golf course architect living who never has had a course appreciably altered that was constructed "ab initio" according to his ideas. Mr. Abercromby, the designer of Addington, Worplesdon and Coombe Hill, has, as far as I am aware, never had any of his courses altered. Moortown, where the Ryder cup match was played this year, was constructed more than 20 years ago and with the exception of a few new tees and one new green, necessitated by a change in the site of the clubhouse, never has been altered.

Alwoodly, its near neighbor, an older and even better course, has never had any alterations. Is it conceivable that a course like Cypress Point will ever be changed?

The truest economy in the long run is to obtain expert advice to make certain that the design and construction of a course is final and that all one's efforts can be devoted to maintenance.

#### Brain Cheaper Than Brawn

In other words, substitute the high cost of manual labor by the comparatively speaking low cost of mental labor.

It would take a book to describe in detail all the faults in construction which may give rise to excessive cost in upkeep, but some of these may be enumerated.

Abrupt hillocks, hollows and banks of bunkers of an unnatural appearance. These are difficult to mow and, in fact, even today there are courses in existence where these artificial features have to be mown with a scythe.

#### Lost Ball a Course Deficit

One of the most important considerations in creating a pleasurable golf course is to make it so that no one ever has to look for a golf ball. It is no fun looking for your own ball and even less in looking for your opponent's. A course should be constructed in such a way that it is easy to keep down all rough grass and other vegetation with a mowing machine.

#### Watch Top-Soil

Insufficient top-soil or the wrong kind

of top-soil is certain to create trouble and expensive upkeep. It is important that all top-soil should be free from weed seeds. On some courses we have, preparatory to sowing, ploughed and turned over the ground as many as nine or ten times so as to sterilize the soil and obtain a seed bed free from weed seeds.

It is also of the utmost importance to choose the right kind of seeds and fertilizers most suitable for the particular soil and climatic conditions in the locality where the course is situated.

It must be remembered that seed and fertilizers most suitable for agriculture are almost always wrong for golf. Farmers require grasses with a large leaf growth and a small root growth. Golfers, on the other hand, require dwarf leaf growth combined with a thick mat of root growth.

One of the most common mistakes in greenkeeping is over-feeding with the wrong kind of fertilizers. Alkaline fertilizers, although at times of value, may create irreparable damage. I have known cases in which it has cost thousands of dollars to neutralize the evil effects created by fifty dollars of the wrong kind of fertilizer.

The general principles of greenkeeping outlined in my book on golf architecture written many years ago apply just as much today as when these principles were first written.

#### Test Before You Plant

It is always desirable before sowing to have experimental plots to test out the effect of different seeds and fertilizers on varying soils. These experiments saved us from disaster at Cypress Point. Trial plots showed us that the top-soil we at first thought was most suitable was valueless. It was too sterile and lacked the bacteria necessary for the growth of the best golfing grasses.

The result of these precautions has enabled us to obtain greens and fairways at Cypress Point which, in less than two years, compare favorably with any in the world.

Bad drainage is another factor which creates difficulties and excessive cost of upkeep. It is always well worth while for a club to pay for the advice of a skilled drainage engineer. Drainage is a very intricate subject and should only be undertaken by a specialist.

A course should be designed and con-

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Fred Burkhardt has done a nifty job of landscaping in the rock garden he has installed at the Westwood Country club, Cleveland, where he is greenkeeper. The garden encloses a flagstone walk that winds its way from the locker-room entrance up a slope to the eighteenth green.

structed in such a way that the cost of drainage is reduced to a minimum.

Sand traps on the wettest clay soil, for example, can be constructed so that no drain pipes are required.

Watering is another important consideration in the cost of upkeep. In certain soils and under special climatic conditions it may be possible to do without water at all.

As an example, at Moortown, England, where the pros commended the course so highly, the greens were made with a water-retaining humus and sodded with grasses which require a minimum of moisture, so that in the last 20 years there has never been any occasion when it has been necessary to water them. In other climates it may be necessary to have a complete watering system for the greens and fairways.

This should always be designed by a skilled water engineer. There are not more than two or three in America who are capable of designing a first-class hoseless system, and even these are learning by experience daily. In lessened cost of upkeep a hoseless system not infrequently pays for itself in three or four years' time.

There are many other factors which increase the cost of maintenance. Take the question of bunkers for example: Most golf courses have far too many bunkers and this increases the cost of sand tremendously. Where sand is expensive bunkers can be made so as to require a very small amount and yet be equally effective. On inland courses coarse sand should be used so that it will not blow out of the bunkers.

Too Many Bunkers

Bunkers should rarely be made from a penal point of view. Strategic principles are the only considerations which should influence one in placing bunkers. On the Royal Sydney and Australian golf courses some years ago I advised them to convert more than 100 bunkers on each course into grassy hollows, constructed so the mowing machine could be put through them. Visitors from Australia are unanimous in telling me how much these courses have improved, not only in pleasure and interest, but as tests of golf. The cost of upkeep has also been lowered considerably.

Some greenkeepers make the mistake of spending too much money on golf courses. Faults of commission are more common than those of omission. Golf courses can be easily overfed. A good green will remain good if the grass cuttings removed in the mowing are replaced in the form of a compost and well brushed in. Excessive alkaline fertilizers will bring up weeds and create a great expense in hand weeding. Excessive acid fertilizers may, on the other hand, accentuate brown patch and other evils. Beware of over-doctoring!

#### Use Birds and Animals

Before killing off birds and animals that appear to be doing harm to a course it is as well to make further investigations as to the possibility of them doing good.

Birds, for instance, that are pecking up greens are in reality helping to get rid of grubs, culworms, etc., which if left alone will do infinitely more harm than the birds.

In Scotland there are many golf courses kept by a greenkeeper and thousands of rabbits which are much better than others on similar ground kept by a dozen groundsmen.

In Britain there are seaside courses which have been ruined by killing off the rabbits. The amount of harm they do is infinitesimal compared with the good they do in keeping courses free from weeds and coarse grasses.

In conclusion I would like to emphasize the importance of lessening the cost of maintenance or having the best expert advice in regard to drainage, watering and other problems.

Make certain that your layout is final and that you will not in subsequent years be continually making alterations and socalled improvements.

The best advice is always the cheapest in the long run. Many clubs would actually save money by having their courses completely reconstructed and all of them would benefit by having expert advice once or twice a year to prevent them wasting their money in doing things that are harmful to a golf course.

# John McNamara, Greenkeeping Expert, Dies at Pittsburgh

PITTSBURGH, Pa.—John McNamara, greenkeeper for the Pittsburgh Field club for the last 12 years and for the 16 years prior to that greenkeeper for the Pittsburgh C. C. which he helped to build, died here September 1.

McNamara, a capable and quiet man of

high achievement in his field, was born in 1871 in County Limerick, Ireland. He went to England when he was 20 and followed the profession of gardening until he came to Pittsburgh. John had been ailing for some time but made a sturdy struggle to get right by keeping his mind on his club work and on his duties as treasurer of the National Association of greenkeepers. He was one of the organizers of that body and served two terms as a vice-president. His widow and four children survive him.

## Greenkeepers Set Feb. 4-7 As Louisville Show Date

SHOW committee of the National Association of Greenkeepers of America, headed by Fred Burkhardt of Cleveland, has set on February 4 to 7 as the time of the association's third annual convention and exhibition.

The exhibition will be held in the Armory, across from Hotel Kentucky. Program sessions of the convention will be held in a room in the Armory adjoining the exhibit space. This year the association hopes to be able to get the half-fare deal through with the railroads as a minimum of 150 registrations for reduced fare rates now is required by the transportation people against the 250 demanded at Buffalo convention. Arrangements will be made by the association to handle the rebate applications so the boys will come to the show conversant with the procedure necessary.

Details regarding exhibition space may be secured from Chairman Burkhardt at 405 Caxton Bldg., Cleveland, O. Other members of the show committee are Grange Alves, George Davies, Lewis Evans, Victor George, Emil Loeffler, John Mac-Gregor, John Morely, Walter Reed, Capt. David Rees and Herbert Shave.

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