

# CHANGING TIMES

**TORO** Count on it.

Agronomist Bruce Jamieson, who runs his own consultancy, is well known in the greenkeeping industry. In this month's feature, he looks back over three decades at how greenkeepers have learned to embrace and adapt to constant change that has propelled them into a position in which... "Today's Head Greenkeeper is better educated in grass maintenance and golf course management than even the advisors of the 70s".

*Continue  
to learn*

I can almost hear the groans: "Not another old die-hard"... "When I started in the industry"... "Save us!" But times have changed and greenkeeping has come a long way. In the early 1970s most Head Greenkeepers had not even heard of utility vehicles with multi-attachments, while mechanisation arrived with the first ride-on greens triplexes, sold in the late 60s.

Back in the early 70s the committee of a nine-hole golf course employing two greenstaff delightedly showed their Head Greenkeeper a new triplex greensmower and explained that, using this time-saving machine, the greens could be cut in an hour – which would leave enough time for him to then be able to cut the rest of the course!

Having this new machine would also mean that when his assistant retired they would not need a replacement greenkeeper. At which stage, the Head Greenkeeper suggested that the

committee buy two machines as he had decided to retire also!

Cutting machines have evolved, with wheel-driven cutting units being first replaced by belt drives and then by hydraulically-driven units. Where previously greensmowers had only one type of bottom blade, today different types are available for tournaments and normal maintenance.

The power units themselves are now lighter and more reliable, and petrol has given way to diesel, with alternative power sources continually being sourced. Electric power units have been around for several years but battery technology is quite old and until new lighter and more powerful batteries are developed their use on golf courses will remain limited.

Greens aeration in the early to mid-70s consisted of two-yearly hollow-core operations with machines that were cumbersome and slow. Cores had to be brushed up, and then removed by hand, and top dressing was applied using wheelbarrows and shovels. The whole operation could take five to six men at least a week, providing the weather held.

Slit-tine aeration was implemented at least three times a year using the same machine, but fitted with chisel tines. Top dressing would be applied during the spring and autumn, and possibly five to six weeks prior to a big tournament. Again several men would be involved with each operation.

Cutting heights have come down significantly over the years through improved machinery

Picture courtesy of Practical Greenkeeping by Jim Arthur



Hollow coring today can be implemented, cleaned up and top-dressed by three men within five hours of starting. Similarly, aeration programmes today are intensive with verti-draining, hollow and slit tining to various depths being implemented regularly throughout the year. Improved machinery and implementing tasks faster has, however, resulted in reduced staffing levels.

Many previously used chemicals, such as Maysan (Mercurial Chloride) Fungicide and Sydane (Chlordane) used in the early 70s to mid-80s have been removed from the market because, although effective, they were also extremely toxic and damaging to the environment.

Since the introduction of the Pesticide Legislation (1986) all new chemicals must go through detailed and stringent testing before the Pesticide Safety Directorate will give approval for use. The introduction of this Act therefore made it mandatory for course managers and head greenkeepers to record accurate chemical usage, together with obtaining appropriate certificates such as, PA1, PA2 and PA6 to be able to apply the chemicals safely.



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Thirty years ago Head Greenkeepers learned by experience as, prior to the introduction of City and Guilds in the early 70s, college courses were rare. Today qualifications have improved significantly. They include The National Vocational Qualifications (NVQ), The Scottish Vocational Qualifications (SVQ) 1, 2, 3, and 4, The National Certificate (NC), The Higher National Certificate (HNC), The Higher National Diploma (HND), Master Science (MSc) to name a few. This makes the Course Manager and Head Greenkeeper of today well-educated and highly trained.

People such as Jim Arthur, Walter Woods, Bill Lawson, Nick Bissett, Martyn Jones, and many others, have been instrumental in driving education forward, making the average Head Greenkeeper of today better educated in grass maintenance and golf course management than even the advisors of the 70s.

Companies such as Toro have also provided valued student programmes such as the MAST Programme (Minnesota Agricultural Student Training) in Golf Course Maintenance, enabling students to spend 18-20 months working on an American golf course during which time five months is taken up attending courses at the university. Toro of course also



corer machine

sponsors the annual Student Awards Scheme with BIGGA.

Impact of The Health and Safety (1974) Act on all UK industries was not fully recognised until the mid-80s. New Safety Legislation (1992) covered The Management of Health and Safety at Work Regulations, The Manual Handling Operations Regulations, The Provision and Use of Work Equipment Regulation, The Personal Protective Equipment at Work (PPE) Regulations, The Health and Safety (Display Screen Equipment) Regulations and The Workplace (Health, Safety and Welfare) Regulations.

These six sets of regulations are wide-ranging and generally apply to all places of work, including golf courses.

The main change was to write one piece of legislation and apply it to all places of work, rather than as previously giving each individual workplace its own legislation – ie, Factories Act, Construction Regulations, etc. The main change within this approach was to identify the person responsible and make them answerable in a court of law. For example, The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985 (RIDDOR), and The Control of Substances Hazardous to Health (COSHH).

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...and whilst none of this may have concerned Mrs Jones here too much, today's customers tend to be slightly more discerning.

  
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**Toro Sidewinder**

The job description relating to the Head Greenkeeper of the 70s was not concerned with maintaining detailed records, implementing health and safety issues, planning budgets, working within the Employment Law, COSHH, RIDDOR, or dealing with committees, colleges, members and green-fee players. Rather it was simply to maintain a golf course. Today knowledge of the above and where and how to access further information when required is an essential part of the job.

Cutting heights have always been a contentious point with committees, owners and golfers who demand faster greens for longer periods of the year. In the early 70s it was commonplace to cut the greens at 3/16 of an inch (4.69 mm) every other day. Daily mowing was reserved for tournament presentation and double cutting reserved for particularly important events. A lowered cutting height of 1/8 on an inch (3.125 mm) would only be sustained for the event and then was raised to allow the greens to recover.

Now greens are cut daily with mowing heights maintained at 3.5 to 4mm throughout summer.

In the 70s Verti-cutting was implemented once every eight to 10 weeks during the growing season and now some greens are Verti-cut once a week.

Deep scarifying, implemented during the spring and autumn, practically dropped out of use. But now, interestingly, it has again become fashionable, particularly since the phrase 'linear aeration' was coined.

Similarly, applications of a fine grain charcoal following spring and autumn hollow coring in order to 'sweeten' the ground was implemented on many of Scotland's West Coast courses during the early 70s and this is also likely to return as it can assist in reducing Black Layer and is relatively inexpensive.

The first verti-drain machines were introduced in the early 80s, and these deep aeration machines breathed life back into many old, heavily-compacted greens which otherwise would have been dug up and replaced. The first machines were extremely slow, with operating speeds of 400 metres per hour. But gradually over the years these machines have been redesigned and improved with slightly higher operating speeds.

Recently 'Drill and Fill' machines have been developed to remove old rootzone material with 20-35 mm drill bits to depths of 30cm and then fill the holes with kiln-dried sand, improving surface and subsurface drainage.

Aeration machines are available which use pulses of water at high pressure for work during the summer months, and subsurface injection machines have been developed to inject insecticide in to the ground to the same depth at which grubs are found, which reduces chemical requirements.

Considering the vast changes that have already occurred, you can bet that changing times for the next 30 years should prove to be just as, if not more, exciting and challenging.



**Bill Lawson. Made a huge contribution to greenkeeper education**