confined to the domestic sector. This entails blowing air at high speed down a tube and directing it at the end over a curved surface. A low-pressure area is created which draws in more air causing a powerful vacuum effect, with and debris sucked into this vortex and passing directly into a collector. An advantage of this method is that material does not pass through the impeller. However, these units are generally designed more for the domestic consumer than the professional.

Vacuum types of machine come in three configuration's hand-held, walk behind and tractor driven. The smaller units are usually conversion kits for a portable blower and one disadvantage is the size of the collector, so they are generally only ideal in this mode for areas where access is very limited.

The pedestrian operated machines are either pushed or self-propelled with a wide range of engine sizes. Most models have the option of a wanderhose which is ideal for getting into awkward spaces such as drains and culverts, as well as emptying litter bins. Some machines have a facility for dealing with light brushwood and twigs. Also available are specialist machines for dealing with hard surfaces such as carparks and walk ways. This type of unit is ideal where a course is part of a hotel or country club complex.

For wide-open spaces there are tractor-mounted versions, which are either driven from the PTO or have their own engine. The hopper on some models includes high-lift emptying.

Another piece of equipment that falls into this category is the loader. This is a unit that is directly attached to the side of a trailer, skip or vehicle. A large diameter hose enables the operator to suck up large volumes of leaves directly into the receptacle, ready for transporting to a dumping site.

**Rotary Brushes**

Usually driven from the PTO of a tractor, being either front or rear mounted. The latter often includes some form of collecting facility. This type of system will work on grass but is generally better suited to hard surfaces.

**Flail**

Like the rotary brushes, they are tractor-driven. In addition to collecting leaves and litter they can be used for scarifying and for cutting grass. There are some very large units that include a vacuum system for loading into a built-in trailer.

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What do you need to know?

With all this equipment available there is a machine to deal with virtually every situation that one is likely to encounter during leaf fall. To ensure that coping with this operation is both cost effective and efficiently carried out, some pre-planning and groundwork is advisable. A survey of all the areas that will require clearing is recommended, and special attention should be paid to the following:

1. Accessibility - leaves often get into the most awkward spots.
2. The volume to be handled is a major consideration as loading and unloading can take up a considerable amount of time.
3. Where are the leaves going to be deposited and what will happen to the decomposed material eventually?

Once an overall picture has been drawn up, it is time to investigate what machinery is available. Exhibitions, magazines, directories and the Internet are all sources of who makes what. Obtain as much information as possible. This can be found in literature and by talking to other members of your profession or closely related groups such as groundsmen, local authorities and contractors. When it comes to clearing up leaves, everyone has similar problems. Research can be productive, but is only the beginning. The next stage is to consult a specialist. He can advise on the suitable machinery for your specific requirements and arrange that all-important demonstration. This is the evaluation stage, a time to see the machine's abilities, speed of operation and efficiency in dealing with situations like collecting wet material.

It is also an opportunity to find out much more such as who already uses the equipment and can they be contacted - a third party recommendation is always valuable. Check availability of replacement parts and their cost. Length of warranty on components is another area worth investigating. As mentioned earlier, the impeller is at the heart of most leaf blowers or collecting systems and its construction and the material used are vital to the life of a machine. Some models on the market carry a five-year guarantee - a benefit worth having.

Before making a final decision, the question should be asked - "Is there enough work to justify the expenditure, or would hire be a more cost effective option?" This has the obvious advantage of not tying up capital, but the days when the leaves fall cannot be predicted. The equipment may not be available on the days you require it. One alternative to this scenario might be to have machinery on the fleet for the bulk of the work and hire any extra units when required.

Leaves have a habit of falling at the most inopportune times and so plans are needed to ensure that when it happens both machinery and staff are in place to carry out the clear up operation speedily and effectively. Now is the ideal time to address the handling of this annual event and discover what is available to make it as free from hassle as possible.
Gordon Irvine competes for business against some of the top clubs in the country but his traditional methods coupled with a vigorous Fescue overseeding programme means he can do so at a fraction of the cost.

In praise of Fescue

Mill Ride Golf Club has all the trappings of luxury needed for a club which shares a postal address with one of the most famous and prestigious race courses in the world and whose closest golfing neighbours are a little matter of Wentworth, Sunningdale, The Berkshire and Swinley Forest.

Its membership includes many who are also members of that big four as well as some of the most famous sportsmen in the country. It is also on the hit list of some of the country’s top blue chip companies as a potential venue for a corporate day.

Yet the Ascot-based club is run on a tight budget, with a greenkeeping staff of just six, by a man who has jumped the great divide from Course Manager to General Manager.
In praise of fescue

Gordon Irvine's pedigree is second to none. He is a Master Greenkeeper, was the youngest ever Premier Greenkeeper in '94 and is regarded as one of the most eloquent and intelligent men in the profession. Presented with the opportunity of running the whole club by its Asian owners he has taken on the additional duties with the same verve as he continues to run the golf course.

Gordon has been at Mill Ride since he left Turnberry to become Clerk of Works on the construction of the course.

"Everyone at home nearly disowned me. Imagine leaving a Scottish links course and moving to the heartland of England, for heaven's sake. They thought I'd flipped and gone chasing money," he recalled with a laugh.

In fact the reason he left Turnberry and moved to the stockbroker belt of the Home Counties was purely greenkeeper based.

"I was particularly interested in what was being done here. A golf course specification designed to be British, and recognised as British, at a time when it would have to compete against some very big American courses being built around the same time."

Pressed on what he meant by a British specification Gordon elaborated.

"A modern British design and construction which was an imitation links green specification, with drainage as the most important factor. The course was also built with British materials designed by a British architect, Donald Steel, built by a British contractor, Brian Pearson, and with a British agronomist in Jim Arthur."

It was Gordon's conviction that Mill Ride would be able to compete with other new clubs including The London Club and The Wisley which were in the same catchment area.

"I firmly believed that through time our course would be as good as the others, for a fraction of the cost - using traditional British greenkeeping skills."

"After all we gave the game of golf to the world and set the standards for maintenance over the generations. British greenkeeping has developed over the years. People have their own way of interpreting what they want to do, while others go off at tangents, but it normally comes back to the same principals," said Gordon, talking the day after an English golf writer had booted-in-one at the 15th hole at Mill Ride, during a golf day organised for the England football squad and winning himself a £189,000 Lamborghini sports car.

Gordon's current maintenance programme was introduced following a bout of Take-All Patch disease a year after the course opened.

Those grey days tested his resolve and principles to the limit.

"Against my wishes but for understandable commercial reasons, the owners had specified that the greens at Mill Ride be turfed. My feeling was that the Yorkshire soil on which the turf was grown, placed on top of the high pH root zone, with an irrigation water source which also had a high pH, created a situation which made disease a potential problem at a time when club finances were tight with greater and greater demands being placed on the golf course."

"Fortunately the grasses used were Colonial Bent and Fescue because by the time the disease was finished there was no Bent left and all we had was a very thin Fescue sward, very much open to attack by Annual Meadow Grass invasion."

The solution involved long discussions with Jim Arthur and Barenbrug who supplied the seed mixes for Mill Ride, and between them they decided that the best policy was to introduce an overseeding programme using Fescue as the main species with a later injection of Bent when the greens were ready for Bent grass growth."

"That raised a lot of eyebrows in the area because Fescue is not a grass which is particularly well thought of in England. It was felt that it wouldn't cope with the wear and tear," explained Gordon.

"What wasn't understood, though, was that the decision had to be taken on what the greens would take, as at that point, there was no guarantee that the disease, which was still active in the area, wouldn't come back the following summer."

"So we went straight in with a
These three mixtures have been specifically designed for the golf course – from tee, to fairway to green.

MM10 is a mix of fescues and bents, with the slender creeping red fescue ‘Mocassin’, giving a dense, close knit, resilient turf for close mowing on greens and tees.

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golfers who shun away from Fescue, greenkeepers have also given the grass an unjustified bad name, some now favouring American bred grasses with no history of success in place of grass which has stood the test of time. "There was a lot of scaremongering about how Fescue disappeared overnight, I've heard all the stories but I think it's a sad fact that the grass just doesn't get the credit it deserves because it can undoubtedly give you a good fast surface at a higher height of cut, I believe in the future it will have to be used more for environmental reasons."

Gordon also advocates the use of Fescue for fairways.

"It takes very little to maintain them in the summer as they don't need much cutting and very little feeding. We run Mill Ride with a greenkeeping staff of six and despite less than 300 members, we make a profit because our maintenance bills are so small," he said.

"I'm one of their worst customers," he added, pointing to the Grass Roots rep who happened to be visiting at the time.

The initial attempts at overseeding were, by his own admission, miserable and resulted in him making a study of how to achieve success.

"I wanted to know why overseeding was so hit or miss. I know some guys who would hollow core to a depth of two inches and put seed in the holes. Obviously this wasn't going to work. Others would fill the holes to the surface, then dust seed on the surface and then lightly top dress. That had a chance but all I could think was that you had all these hollow cores just waiting for meadow grass.

"So I studied the subject further and I looked at various machines before deciding on the one I wanted to use. It was a slice seeder which would enable us to inject the seed into and below the surface and close the surface which was the key as it prevented the meadow grass getting in."

Having taken over as General Manager two years ago Gordon is paradoxically convinced that it has allowed him to become a better Course Manager.

"A lot of people think you can be a General Manager and stay in greenkeeping but what they don't understand is that I write my own diary. If I need to spend six or seven hours on the course I do it because I ensure that the time is in the diary."

Another advantage is that Gordon can ensure that the course gets consideration when corporate events are being scheduled.

"Our Corporate Events Organiser will tell me about events which are being considered and ask me if we can take them, I'll look at the diary and say that the week they were thinking about is earmarked for maintenance and, although open to members, it would be closed to bigger events."

"On the up side, what I can say is when the course is going to be in fantastic condition and that clients should be guided to that time. This way essential maintenance can take place in harmony with an economic need to have a busy golf course."

Gordon's time is split about 60% General Manager duties and 40% Course Manager duties.

"I always take the dog a walk over the course first thing in the morning to get a picture of how it's looking. I've got a wonderful Head Greenkeeper, Mike Holland, whose priorities are to keep all areas cut and tidy and to the standard that I've set him. I'll say when we're going to groom, what height of cut, when we're going to overseed and what seed or fertiliser we're going to buy, all long term greenkeeping practices. He must then carry them out but within a time frame that is most realistic considering the weather etc.

"I manage all the irrigation in the evenings. I often spend three or four hours on the course as it's a wonderful chance to see that everything is the way it should be. Irrigation is the critical maintenance procedure for good greenkeeping. I like to initiate a heavy dew baked up with hard watering and that's about it, so if I tell a sprinkler to go off I don't want it to go off three or four minutes later. I want it off straight away."

"Listening to and talking with Gordon, you are left with the impression of a man who loves his job and has a real passion for the industry. "What I'm most proud of is that I could leave here tomorrow and know that whoever took over would be inheriting something that was very honest that he could work with. I work an open book policy and I've not been spraying fungicide every two weeks for the last six months just to keep it alive, or growing slugs. I believe my job is to producing playing surface for all year enjoyment with nature as my friend not my enemy."

"This way I can please both golfer and Bank Manager."

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Good managers know that the time expended in employee training is more than compensated for in employee loyalty, better equipment maintenance, less lost work time, less equipment down time, fewer insurance claims and reduced liability. Philip Michael Sharples takes a look at...

THE

Routine golf course maintenance tasks require a unique combination of equipment knowledge and operational skill, persistence, an understanding of golf, a keen sense of aesthetics and a broad based knowledge of turfgrass management practices. Maintenance tasks must be performed quickly and regularly, but always with safety and precision.

Golf course employees perform many different tasks involving some of the most expensive agricultural and horticultural machinery in the world, while remaining aware of golfers and other activities surrounding them.

So, here we are in our golf industry, which is quite often a major contributor to the revenue from tourism in many countries across the world. Yet no significant or 'standardised' courses of on-the-job training for employees using mechanical equipment have been established.

In many instances performance of employees could be directly attributed to the techniques and calibre of the Course Manager or information content/quality and nor/the particular machine in question. All of these could and should be regarded as unsatisfactory training methods.

I would like to make it clear that the above is by no means stating that the National Standards in educational qualifications are not significant or standardised but is purely aimed at on-the-job training issues, functions and delivery. The GTC along with their partner colleges have played vital roles in ensuring relevant and quality work based greenkeeper qualifications such as NSVQ's are available.

So, where is this leading to? Well, three years ago, in my final year of study for an HND at Myerscough College I produced a Thesis specifically aimed at the subject of on-the-job training due to the aforementioned points and I would like to briefly share some of my findings with you. What I hoped to gain was a deeper understanding of employee training and mechanical training issues specific to golf course management.

To provide information toward future training programmes and to benefit management practices, while expanding the professionalism needed to keep up with technological advancements in respect of machinery and the golf courses of the future.

Training and the organisation

The last decade has seen a resurgence of interest in the training provided by employers - the courses, events and on-the-job activities that an organisation arranges for its workforce. A dramatic increase has been seen in the provision of educational courses and companies are now competing to recruit and retain the 'knowledge worker'.

The aim of training is to modify or develop the knowledge, skills and attitudes through learning experiences, to achieve performance in an activity or a range of activities. Its purpose in the work situation is to enable an individual to acquire abilities in order that he or she can perform adequately a given task or job.

Training provides benefits to both employees and the organisation. Trainees may gain greater intrinsic or extrinsic job satisfaction. Intrinsic job satisfaction may come from performing a task well and from being able to exercise a new repertoire of skills. Extrinsic job satisfaction may be derived from extra earnings accrued through improved job performance and the enhancement of career and promotional prospects, both within and outside the organisation.

Benefits for the organisation include improved employees work performance and productivity; shorter learning time which could lead to less costly training and employees being "on-line" more quickly; decrease in wastage; fewer accidents; less absenteeism, lower labour turnover and perhaps most importantly greater customer or client satisfaction.

To summarise, I suggest that in preparing an individual to perform a specific task more effectively, training can contribute to the organisation achieving its current objectives. Although more importantly in some respects is the influence that the content and conduct of training can have on the attitudes towards the processes of learning and development. This in turn can create a "learning organisation" that is more flexible and responsive in coping with present and future internal and external demands.

On-the-job training

On-the-job training is a key way of progressing new recruits, developing apprentices, or other long-term trainees, teaching employees new skills when new equipment and methods are introduced and a way of updating and upgrading new skills. At the crudest level on-the-job training can be taught informally to
the newcomer or inexperienced by an experienced worker already doing the job to be mastered. This can be successful if the skills can be easily mastered, if the experienced worker has instructional skills, can spare time to instruct and possesses current knowledge of the best work methods.

At a more sophisticated level the trainee can be given opportunities to learn through the use of brief induction programmes, by changing jobs at planned intervals (job rotation) and by means of coaching.

In a profession where the potential for accidents is high the implementation of an on-the-job training programme has a number of potential possibilities:

- a) Prevention of serious accidents, alleviating the possible future suffering of an employee and the resultant absence of that employee.
- b) Improved quality, quantity and efficiency of workmanship.
- c) Better uniformity of workmanship if each employee has received the same training.
- d) A significant reduction of equipment breakdown. Operators are taught to correctly operate their assigned equipment and carry out correct daily maintenance.
- e) Prevention of legal action aimed at you or your company.
- f) An effective training programme can help show your employee has instructional skills, can spare time to instruct and possesses current knowledge of the best work methods.

Disadvantages

- a) The instructor (usually a supervisor or trusted worker) may have limited teaching experience and may not have enough time to give proper training.
- b) The trainee may be exposed to bad methods and learn these instead of more efficient methods.
- c) There is a risk of damage to valuable equipment.
- d) There is a risk of spoil or damaged work being produced.

Data needed to design and implement training programmes for the organisation or the manager are notoriously difficult to understand and produce. I found for the needs of our industry the most relevant and easily achievable root to be a systematic training model that is based on a continuous loop. This has two key characteristics - Training can be perceived as a sequential set of steps and identification of needs can be introduced into the training cycle at the appropriate stage. The subjects that require attention are set in the correct order of attention which follows:

Identification of learning requirements; Job analysis; Training objectives; Training Strategy; Design and delivery of training and lastly but most importantly Evaluation of learning.

All these subject areas should be discussed in detail and are all extremely important to successful training but for the purposes of this article I am afraid will have to be skipped over. Copies of my thesis which explains fully all the above and sets out three on-the-job training programmes written with this model namely verbal, visual and written can be made available to interested parties by application to the Principal at Myerscough College.

Being a Course Manager with time constraints, I suspect lack of an organisational support group, a more reasonable approach to on-the-job training might come from the Training Within Industry model. This was originally established in the USA during the Second World War. It is probably the most commonly used approach in both the USA and the UK.

When drawing up an outline plan for training trainers will need to bear in mind the nature of the learning group or learner; training content; performance criteria; timing and duration of the training sessions, and guidance and assessment procedures. One of the first steps any trainer must take should be that of attaining a D32/D33 assessor qualification.

I feel the future holds many new challenges and innovations for our profession and full scale on-the-job training programmes will need to be designed and implemented as a matter of course. Only time and effort will tell!

References


Since its formation in 1987, the British and International Golf Greenkeepers Association has demonstrated its commitment to enhancing the recognition of the greenkeeper as a professional, and to advancing golf course management and maintenance techniques to ever higher standards. Golden and Silver Key company members share a commitment to supporting the advancement of both the status of the greenkeeping profession and standards of golf course management. They are the leaders in helping to provide the financial support necessary to satisfy the requirements of the Education and Development Fund’s mission.

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