

herbicides are best option



Trees protected from rabbit browsing by the use of 60cm plastic spiral guard with bamboo for support. These trees were weeded via a winter application of kerb granules

make little odds, presumably depending on season.

Propyzamide concentrate can be harmful to fish and, as with all chemicals, ponds, waterways and ditches should not be contaminated or used as a dumping ground for empty containers.

Organic soil decreases the activity of propyzamide and treatment of soils with depth of peat greater than 10cm is not recommended. Pre- and post-planting applications are possible, however pre-planting applications can cause problems and have resulted in tree mortality, so is best kept for post-planting applications.

■ **Isoxaben (Flexidor 125 or Gallery 125):** This is a pre-emergent liquid herbicide sprayed on bare soil to control broadleaved weeds. It is useful when applied mixed with kerb flo (ie. liquid) when treating dense grass as the kerb kills the existing invading grass for 3-6 months and the Isoxaben prevents colonisation of the broadleaved weeds. Their action in the tank-mix is complementary leading to effective control of grasses and broadleaved weeds. Expensive, though Flexidor is much cheaper than Gallery.

■ **Glyphosate (Roundup):** This is a translocated herbicide taken up by the foliage and conveyed to the roots. It causes chlorosis and eventual death of leaves and then kills roots and shoots. It controls a wide range of weeds including: grasses, herbaceous broadleaved weeds, bracken, heather and woody weeds. When applied late in the growing season, the main effect is obtained in the following year. On contact with the soil is inactivated and quickly broken down.

It can be applied at any time of the year when vegetation is actively growing but is most effective on broadleaved weeds when they are close to flowering but before senescence.

Certain conifers will tolerate overall glyphosate sprays provided leader growth has hardened. Hardening can occur as early as the

end of July or may be delayed until the end of October in some locations.

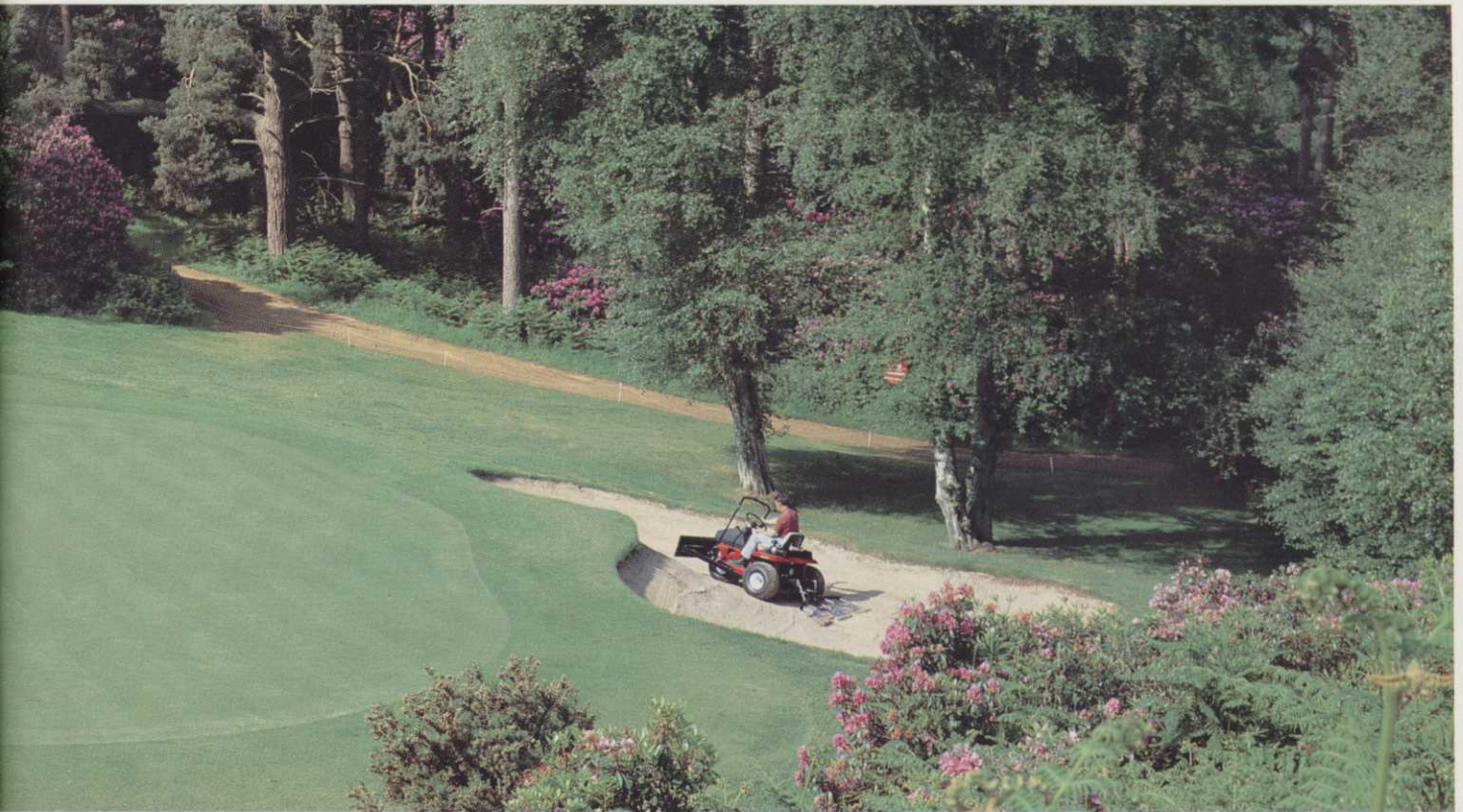
Broadleaves, larch and other conifers will not tolerate overall applications; always use a guard, a weedwiper or a directed spray to avoid contact with the foliage and immature bark of crop trees.

Glyphosate applied later than June will be too late to lessen the effect of weed competition in the current season. It is most effective on moist vegetation and when relative humidity is high and air warm. Heavy rainfall within 24 hours of application may reduce the herbicide's effectiveness by preventing sufficient foliar absorption.

Grass

Grasses especially can compete vigorously for light, nutrients and in the lowlands and drier uplands, for water; effective control is therefore usually essential for successful tree establishment and growth.

Perennial rhizomatous grasses are the most difficult to control and require the use of residual herbicides (Kerb) or frequent application of contact herbicides (glyphosate). Kerb



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Tackling WEEDS before they kill the TREES

will have some effect on herbaceous broadleaved weeds but wherever they constitute a significant part of the weed population, glyphosate is more likely to give good results. Isoxaben will also keep out the broadleaved weeds.

As glyphosate is a contact herbicide, it should be noted that grasses treated in early April will invade and re-establish themselves by May/June if it is a warm moist spring. If this occurs, a second application will be required.

A winter application of Kerb followed by a glyphosate application during the summer to treat subsequent broadleaved weed invasions is a useful programme to consider for broadleaved/conifer planting schemes.

A pre-planting application of glyphosate in strips can speed up planting by reducing subsequent screening time and also by providing the tree planters with pre-determined lines.

Broadleaved weeds

Land managed for agricultural production usually has an enormous number of weed seeds in the soil. These are generally not apparent because, under pressure, grass prevents most weed species becoming established and under arable crops, weeds are controlled initially by herbicides and later by the smothering effect of the crop. Whether agricultural soils are left unmanaged or efforts are made to maintain bare ground, a succession of weed

species takes place, although not disturbing a cereal stubble may delay and reduce this influx to some extent. This process starts with a rapid invasion of volunteers from the previous crop and annual arable weeds. Gradually these annual weeds are replaced by perennials, many of which are deep rooting and difficult to remove selectively using herbicides between broadleaved trees and some conifers. Examples of such weeds are dandelion, docks, creeping thistle, perennial nettle and bramble. The best way to remove these weeds is by repeated application of foliar-acting herbicides, applied in ways which avoid contact with the user.



The survival of large trees is not as good as that of small trees. Watering trees in Bexley during the recent drought summers was necessary

Chemical update

Tree planting on golf courses is similar to planting elsewhere and only a small proportion of the UK forest area is treated with herbicides each year (<1%). During a recent five-year period, Forestry Commission use of herbicide products declined by one third, although the area treated remained constant. The most commonly used herbicide is glyphosate, which was applied to over 70% of the area treated in 1991. A reduction in amounts of herbicide applied per unit area reflects the use of both directed spot applications and products which require lower doses of active ingredient for forestry application, whilst others (eg. some triazine products) have been discontinued for commercial reasons. Withdrawal has occurred particularly where further information was required for label registration by the Pesticides Safety Directorate.

Approval status of forest herbicides

Under the Control of Pesticides Regulations (1986) only those products approved for use as forest herbicides can lawfully be used to control weed species.

There are two types of product approval which users of pesticides must be aware of:

1. Label approval (full approval): The approved product label, found on the herbicide container, states the conditions for the use of the product. These represent the only uses for which the product was developed.
2. Off-label approval: Some products may have local importance or a minor use for which no full label approval exists. In these circumstances, off-label approval may be granted after application to the Pesticides Safety Directorate. For these products a copy of the off-label approval should be obtained by the user. Often a leaflet or other source of information may give further information on the conditions of use.

It is the product and not the active ingredient which has label approval. Therefore it is not permissible to apply an alternative product with the same active ingredient as an approved product, unless the alternative product also has approval for forestry use.

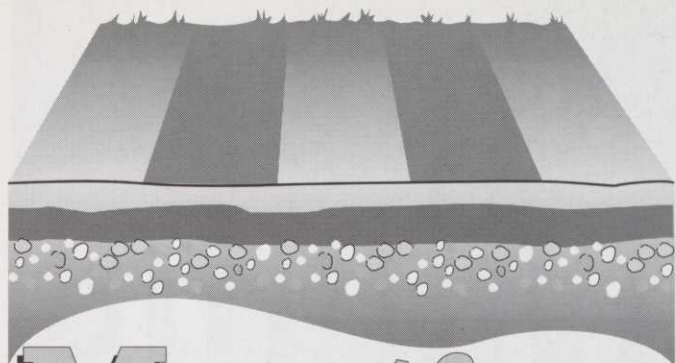
Conclusion

Successful tree establishment depends on the correct species choice, followed by good planning, planting, weeding and maintenance.

Chemical herbicides are a great aid to the woodland manager and their correct use is both an economical and effective means of ensuring that the trees we plant today will be the quality woods of tomorrow.

Happy weeding!

● Eamonn Wall is a woodland architect and principal partner of Eamonn Wall & Co, a woodland design and management company specialising in design and tree planting projects on golf courses. Telephone 01259 743212.



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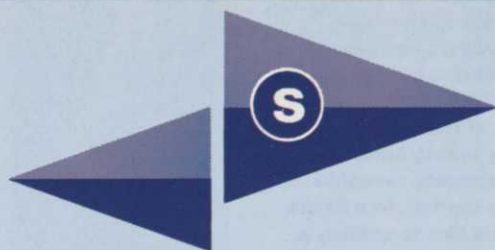
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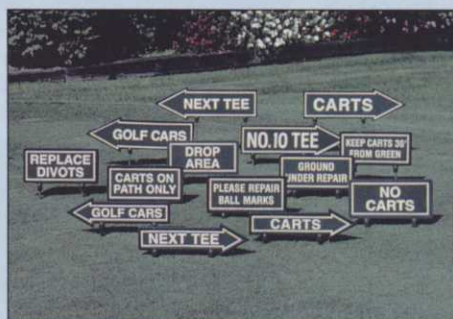


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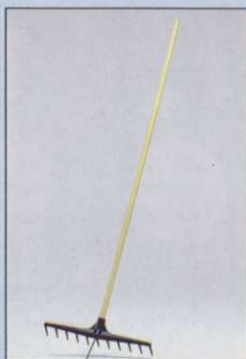
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AD REF 421

They may have different grasses, more sunshine, bigger budgets and bigger wage packets, but their problems are just the same. A survey of the main problems facing American superintendents revealed the following top ten. In a future issue we'd like to publish a UK top ten, so write in with your suggestions - there's a crisp tenner for the best suggestions. This report by Robert A Brame, agronomist, Mid-Atlantic Region, USGA Green Section

10 pitfalls of golf course maintenance

Wouldn't you be interested in knowing the most common golf course maintenance problems identified by agronomists who visit nearly 1,700 different golf courses each year and whose combined experience in professional turfgrass maintenance exceeds 150 years? If so, read on! A survey of the USGA Green Section staff revealed these Ten Pitfalls of Golf Course Maintenance.

A pitfall, by definition, is "a hidden or not easily recognised danger or difficulty." Exposing the top ten hidden dangers in golf course maintenance and recognising them for what they are should help us avoid these traps or point us toward strategies for improvement.

1 Communication and Public Relations

The number one rated pitfall in golf course maintenance isn't even agronomic in nature! As a matter of fact, good communication is a critically important area in every industry and in life in general. While this has always been true, the importance of good communication and public relations in golf course maintenance has grown with each passing year. Environmental concerns, demands for better playing conditions, concern about expenditures, and employee relations, just to name a few, are all issues that emphasize the importance of communication and public relations.

More golf course superintendents lose their jobs for falling short in this area than any other. Conversely, a variety of agronomic problems can be present

and if players and officials are kept well informed, jobs usually remain secure. Everyone wants to know what is going on. We all like to be informed. If positive and informative communication does not come from course officials, owners and/or golf course superintendents, then players and/or local residents will decide how to view particular situations on their own. This can easily result in an inaccurate interpreta-

tion and a poor understanding of the situation.

To maintain a successful operation, positive communication must be present on a variety of fronts, and the golf course superintendent is not the only one responsible for establishing and maintaining good lines of communication. Course officials or owners also must take an active role in communicating with the superintendent, players, commu-

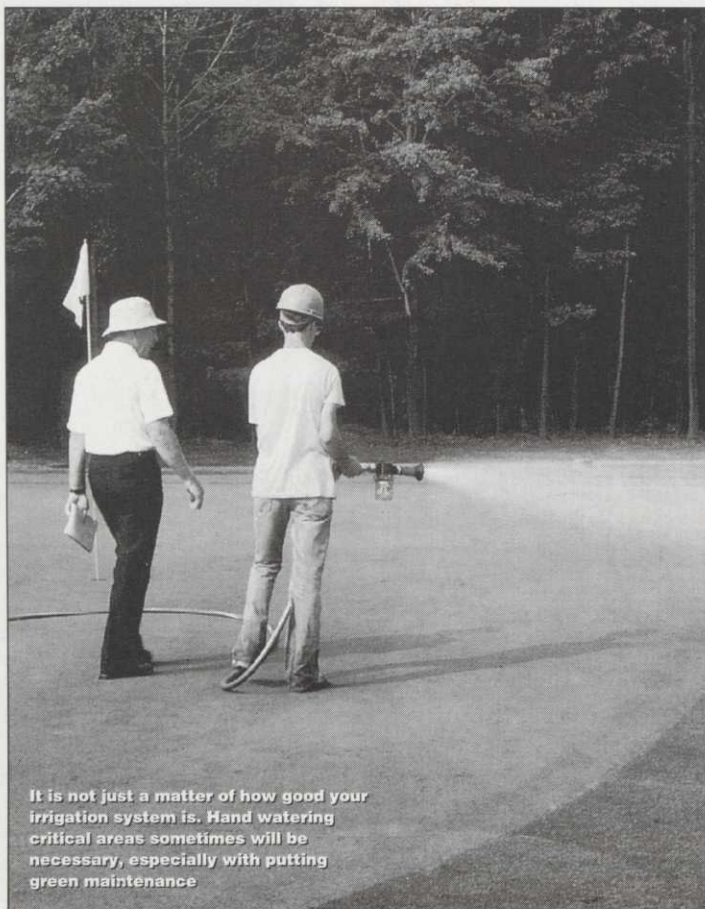
nity, news media, peers, and other staff members. Sometimes taken for granted is the need for course officials to communicate their desires about course conditioning to the superintendent. Without a clear job description, incorrect assumptions can be made.

In addition, good communication with spouse and family members is of supreme importance. Problems on the home front always overflow into the workplace and vice versa.

Effective, positive communication can be accomplished in many different ways. Letters, memos, reports, and newsletters all have their place. The use of signs and information boards also can be advantageous. Verbal presentations at meetings and conferences, as well as informal question-and-answer sessions on the golf course, are part of the package. The clothes you wear and the manner in which you handle yourself either contribute to or detract from the spoken word. The staff you hire and their ability to do the job communicate a clear message without a word being spoken.

Is a soil probe used when explaining the importance of proper timing of pre-emergence herbicide applications? Is a camera being used to provide visual documentation? The means of effective and positive communication are limited only by individual creativity.

Communication and public relations are vitally important to the ongoing maintenance of any golf course. Volumes have been written on the importance of



It is not just a matter of how good your irrigation system is. Hand watering critical areas sometimes will be necessary, especially with putting green maintenance



Attempts to communicate don't always work the way we would like... Good communications are a critically important area in every aspect of golf course maintenance

communication, yet it is amazing how often we forget this fundamental truth. Communication is something we all do whether we are consciously thinking about it or not. The key is to make sure we communicate in a positive and informative manner. Evaluate your operation and develop a strategy for improving your communication and public relations efforts.

2 Overwatering

No doubt about it, when a putting green is overwatered, a sculled 7-iron shot will hold better. But sculling a shot that still holds the green is a good indication of poor playing conditions. Thus, there are few benefits from overwatering, but there are quite a few problems which inevitably occur.

An over-wet rootzone prevents the grass from producing deep, healthy roots and makes the soil more prone to compaction effects. Shallow, weak roots cause the grass to be more prone to stress, and when tough summer weather conditions set in, the grass plants simply do not have the reserves needed to maintain strong and healthy growth. Weakening continues

and is intensified by traffic, disease and/or a poor growing environment (shade and/or poor air circulation). At the very least, overwatering usually results in greater fungicide use to counteract heavy disease pressure. Further, mowing, topdressing, aeration, and maintenance in general are more difficult with overwatered turf. The interaction of all these negatives (weakened and thinned turf, disease, reduced maintenance efficiency, and increased costs) creates poor and inconsistent playing conditions. Overwatering must be avoided.

Good water management involves both irrigation and drainage. Therefore, when considering this second pitfall in golf course maintenance, both systems must be evaluated. Irrigation programmes must be compatible with existing drainage. In many instances the first step in moving away from overwatered turf is to improve a poorly drained rootzone. The installation of drainage lines may be needed. Positive surface drainage (no bird baths) is also very important. Deep aeration has proven very helpful in some situations, but severe drainage problems may necessitate recon-

struction. There is no substitute for good drainage.

A good irrigation system and its proper use can help prevent overwatering. But whereas a well-designed system is a valuable tool, overwatering sometimes can be more severe on courses with automatic systems. Some owners, course officials, or superintendents say, in effect, "We've got this expensive system, so we'd better use it!" A computer is a wonderful tool, but it does not replace the use of a soil probe in determining soil moisture and sprinkler programming. When programming is performed, aim toward the dry side, and be prepared to hand-water the dry areas. More water can always be added, but when too much has been applied, it is difficult to reverse the effects. Overwatering resulting from poor drainage and poor irrigation practices will likely maintain a spot in the top ten for many years to come.

3 Fast Green Speeds

Actually, fast green speeds are not the problem. The problem is what you have to do to the turf to keep fast greens. Lowering cutting heights and holding back on nutrients are often part of the

strategy in obtaining fast putting green speeds. But just remember, a golf ball will roll even faster on compacted, bare soil! This end of the continuum is not acceptable, so a balance between healthy grass and reasonable putting speeds is needed.

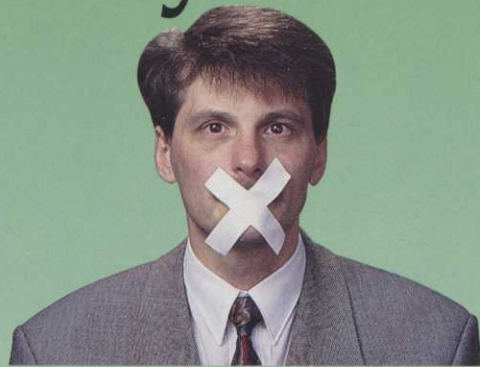
Excessively close mowing establishes a growing environment that encourages and enhances the growth and spread of *Poa annua*. This grass is expert at establishing itself in areas where bentgrass has become thin and weak due to excessive mowing. When *Poa annua* is present in moderate to high percentages, maintaining a healthy and consistent playing surface becomes even more difficult and expensive. Bentgrass is more economical and dependable when maintained at a reasonable mowing height of at least 5/32 inch.

Low fertility levels reduce the recuperative ability of the turf, leading to increased disease and traffic-related problems. Therefore, a maintenance programme must focus on doing what is best for the grass plant to maintain a consistent and healthy putting surface. Fertilise to achieve good density (both leaf and root density). Avoid getting hung up on numbers (pounds of nitrogen per 1,000 square feet); grow a strong, healthy turf and allow the numbers to fall where they may.

Light and frequent grooming and topdressing can complement a sound fertility programme and a reasonable mowing height in creating a good product. This combination will allow for reasonable putting green speeds, somewhere between 7.5 and 9.0 feet as measured with the Stimp-meter, depending upon weather conditions. Double mowing offers a safe option to increase putting green speeds for special events without over-stressing the grass plant. Additional mowings can add 3 to 4 inches to the speed. This strategy should be started several days before the event.

Rolling is another option for increasing green speeds that may be worth considering, depending upon the equipment used and the soil texture of the green. The increase in speed from rolling can be significant (12 to 18 inches), although it usually does not last more than a day or two.

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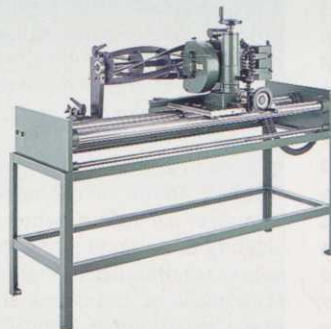
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10 pitfalls of golf course maintenance

Consistently ultra-fast green speeds are unrealistic, expensive, and bad for the grass. The Stimp-meter was developed as a tool to help golf course superintendents check putting green consistency and speed from hole-to-hole on a given golf course. It was never intended to be used as a yardstick to measure how close to the brink of disaster you can go. Grow a strong, healthy grass plant first, and then do what you can to safely enhance speed and consistently. SPEED KILLS, so avoid getting trapped in the fast lane.

4 Use of Pesticides

This pitfall specifically refers to the overuse or unnecessary use of pesticides. The increasing demand for perfection in golf course playing conditions has caused many to employ preventative spray programmes; that is, spraying a pesticide before symptoms or signs of pest activity are actually observed.

The merits of a good preventative spray programme are fairly obvious. Stopping a problem before it occurs can make a lot of sense. In some cases, preventative spray programmes have proven to be both efficient and economical. However, when a potential problem is treated before it occurs, it is never clear that the problem would have occurred at all. Pests rarely attack all 18 greens, tees, or fairways with the same intensity. Every golf course has indicator areas, or "hot spots," where certain pests are more likely to cause damage. Why not treat these "hot spots" preventatively and watch the rest of the golf course for indications of trouble? It is true that such an approach can be more risky and may increase labour costs initially, but in the long run, both labour and pesticide usage may decrease.

The growing popularity of the game of golf has left many courses packed with players. This has made it more difficult to perform routine maintenance work, especially when it comes to making chemical applications. Some are limited to spraying on Monday mornings, while others have decided to spray at night. When a golf course superintendent knows



Too much water will cause problems in every aspect of turf management, as well as golf course playability. Proper water management involves both irrigation and drainage

spraying can be done only on Monday, or on a rigidly set time frame, a preventative approach to pesticide applications becomes a necessity. A greater degree of flexibility in application times would allow for greater flexibility with respect to pesticide usage. In most cases, more leeway must come from owners or course officials and may involve restricting play at certain times to comply with product labels.

It is essential to know exactly what pest you are going after. When the proverbial "kitchen sink" is thrown at a particular problem, often through preventative spraying, it may be impossible to determine just what the pest was and what provided the best control. Careful diagnosis of the actual pest must occur before a good control strategy can be developed. The areas already discussed (water management, mowing heights, and fertility levels) are directly tied to the need for a pesticide and the amount that may be needed. As an example, raising the mowing height can greatly reduce the potential for summer patch disease on putting greens and should reduce, if not eliminate, the need for a fungicide for control of this disease.

5 Continuity of Course Officials/Green Chairperson

It is very difficult to communicate efficiently and develop a solid working relationship with your boss if you have a new one every year. Unfortunately, this is the scenario that occurs at some courses, where a new chairman of green is elected or appointed each year. To further complicate the problem, short-term green committee members often want to "leave their mark." This results in poor communication with the golf course superintendent and two completely different agendas for the maintenance and improvement of the course.

Lack of continuity in course officials and green committee chairpersons sometimes results in a quicker turnover of golf course superintendents. The superintendent's career is set back and so is the overall golf course maintenance programme. The approaches taken to achieve good continuity are as unique and individual as each golf course operation. A longer term of office, overlapping officials, and a better understanding by all parties as to what is expected (written contract) should help enhance continuity. Avoid the tendency to play down the importance of continu-

ity; it affects the entire maintenance operation.

6 Pesticide Storage and/or Maintenance Buildings

It is shocking how inadequate many golf course maintenance facilities are! Pesticides, equipment, and supplies worth hundreds of thousands of dollars often are stored and maintained in what could more accurately be called a barn. In some cases, no provisions have been made for employee restrooms or emergency wash stations.

The maintenance area is usually out of sight for those playing the golf course, and in too many instances it is out of mind as well. Course officials must understand that a modern, well-organised golf course maintenance facility is vitally important in operating a safe and efficient programme. At many courses this would necessitate some degree of remodelling and modernising of the existing facility. At other courses, the existing facility should be leveled and replaced with a new building.

7 Tree Management

Good tree management involves the wise planting of new trees and the trimming, root pruning, and selective removal of existing trees. Unfortunately, trees have become sacred at some golf courses, making it very difficult for the golf course superintendent to perform needed tree management work. This is unfortunate, because there are times when tree work needs to be done in the best interest of the grass plant.

Grass needs direct sunlight to grow, and air movement is important to reduce disease and traffic-related damage. Trees which are too close to important turf areas place the turf under a great deal of unnecessary stress. There is no doubt that a good tree management programme is an integral part of maintaining top-quality turf on many courses today.

8 Amount of Play

This pitfall points to a variety of problems that can occur when

10 pitfalls of golf course maintenance

too much play is allowed on a golf course. At many golf courses, maintenance work is not being done correctly or on a timely basis because of the high volume of golfers. As noted earlier, there are times when essential maintenance activities must come before the playing of the game. Aeration, topdressing, and spray applications are a few examples of maintenance practices that are done much more safely and efficiently without player interference.

Perhaps the course should be closed for a half or even a full day each week. Winter play may need to be restricted. Some courses are establishing a yearly cap on the amount of play they will allow, and then working backwards to determine a daily limit. Maintenance work protects and preserves a golf course, and provisions for its proper scheduling must be made.

9 Labour: Not Enough and/or Under Qualified

Generally speaking, 60 to 75% of a golf course maintenance operating budget consists of salaries and wages. This represents a very important part of the superintendent's management responsibilities. Budgetary levels which are not consistent with expectations are felt most in this area. A mutual understanding of expected maintenance standards must be decided for a proper budget to be determined. Trying to achieve the work of 30 people with a budget that allows for only 15 sets the stage for a collision. Linked closely with adequate numbers is the need for experienced, well-compensated, and trained employees. Every employee is in a position to make the superintendent look like a clown or a genius. Competent, well-trained employees are a tremendous asset. Shortcuts in

this area will affect all other aspects of the operation.

10 Equipment: Not Enough and/or Poor Quality

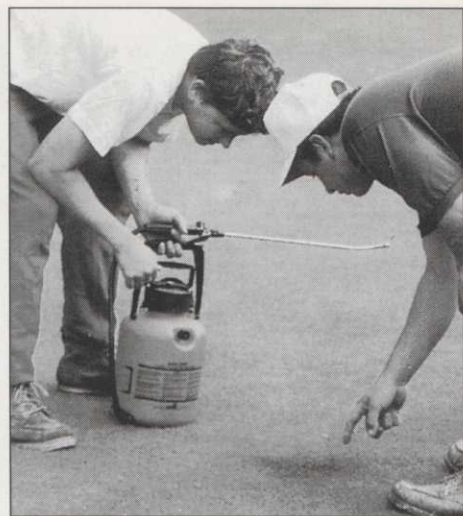
This tenth pitfall is very similar to the ninth. It does not matter how skilled the golf course superintendent is; without good tools, the work will not get done properly, and it may cost more to do. Here again, budget levels and maintenance expectations must be in balance.

Conclusion

Discussion of each pitfall could be an article unto itself. However, our intent was to identify areas in which improvements can be made to golf course maintenance operations anywhere in the country. As with most aspects of golf course maintenance, these ten

pitfalls are interrelated and, as such, success or failure in one area will ripple through the entire programme.

Every maintenance operation has its strengths and weaknesses, and it is hoped that this listing of pitfalls will help you identify yours. Amplify your strengths and develop an appropriate strategy for improving on your weaknesses. The alternative is to continue hitting your head on the same rock. "Failure to study and learn from the past leaves us doomed to repeat it!"



Competent, well-trained employees are a must. An understanding of the expected maintenance standards and how to properly accomplish the job must come from the head greenkeeper

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Euro regulations place emphasis on more sophisticated engines

Engines in the new world of European legislation have to be increasingly sophisticated to assist manufacturers of all types of machinery to meet the EC declaration of conformity, introduced on January 1 this year.

The manufacturer of the machine must build the product to meet the regulations. It is in the interests of the engine supplier to produce models which meet the criteria, so that the engine can be fitted without additional safety features.

The council directive is mandatory. Products must be designed as far as possible to realise the objectives.

As will all EC legislation, the requirements are comprehensive and include filling and draining of fluids, storage, guarding on moving parts, guarding against contact with excessively hot or cold parts, noise, vibration and emission. This is by no means a comprehensive list of requirements, but it gives some idea of what's involved.

Machinery manufactured after January 1 1995 must be marked with a CE symbol to denote conformity. There will be a period when goods manufactured before the com-



mencement date may be sold, but by the end of this year all products should bear the CE mark if they are to be supplied within the Community.

Many of the regulations have benefits for the operator of professional golf course machinery. Reducing emissions usually means using less fuel. Less vibration helps the operator to work without fatigue and less

noise gives a more peaceful environment.

Modern engine technology can improve older machinery. If a replacement overhead valve "v" twin is substituted for a side valve horizontally opposed twin in, for example, a Cushman Turf Truck when the original engine is beyond economical repair, substantial improvements are made in noise, vibration, emissions, fuel and servicing costs.

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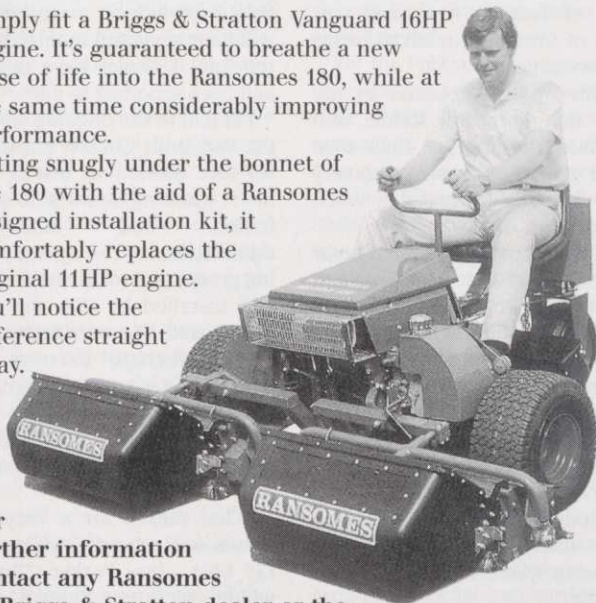
The overall result is that an outlay of around £1,100 plus labour can rejuvenate equipment that would cost in excess of £11,000 to replace. The bonus, of course, is that the reduction of operating costs would cover the capital outlay within three years while upgrading the machine to near-CE standards.

● The author, Bob Watson, is a director of JH Hancox Limited.

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Trevor's greatest challenge

Trevor Smith seemed to have everything... then he decided to go back to golf, as Cedric John reports

Three years ago, Trevor Smith, Yorkshireman and former greenkeeper, was contentedly managing Woodlands Manor Farm estate set in rolling Dorset countryside.

Standing close to the historic market town of Wimborne Minster, a comfortable morning's hack from Casterbridge, scene of Hardy's 'Madding Crowd' rural classic, the estate – and Trevor's lifestyle – might reasonably be described as idyllic, compared that is, to the never-ending demands of golf.

Bound-up in the world of sporting guns, clay-pigeon, duck and pheasant shooting plus a spot of gamekeeping thrown in for good measure, many would go further and say that Trevor was indeed a man to be envied.

So why change it? Maybe golf gets into the blood or perhaps, once the personal challenge of managing manicured wide open spaces of fine turf against the vagaries of nature has been tested – and bested – the urge, as in Trevor's case, to do it all over again is never too far away.

When he was approached and offered the chance to help create a brand new pay-and-play course, at nearby Canford Magna, Trevor Smith didn't hesitate. "Having gained some experience of building greens and tees on my previous courses, I was keen to prove that I could achieve bigger things," he said.

In reality, Trevor's new role held a dual purpose. Having com-

pleted the construction and brought both courses into play, he would then manage the results of his – and his team's – labours.

That, by any standard, must be the ultimate achievement for any progressive greenkeeper. From the developer's point of view, such continuity makes common sense. That's just how the owners of the Canford Magna club, quarryman Bill Riddle, and his partner, Richard Harding, a farmer, viewed the proposed development. As time has shown, their judgement was sound. They now have a golf course, two in fact, which they can justifiably boast about... but that is to anticipate events.

Machinery

Toro 217 rotary greens mower
John Deere 32/38 fairway mower
Toro GM 3000 greens mower (2)
Ransomes Super Certes (4)
Allen National (2)
Jacobsen 7-unit hydraulic gang mower
Jacobsen TriKing tees mower
Kubota 360 mini-digger
Cushman (2) plus attachments
Tractors (2)

Irrigation: ISS/Toro green, tees and approaches fully automatic system operated by computerised controller linked to weather station.



Trevor Smith's association with Canford Magna, then an undulating mixture of arable land and pasture, began in January 1993.

Armed with a detailed blueprint, drawn-up by golf course architect Howard Swan, one of Trevor's first tasks was that of forming a team to tackle the construction.

This was made easier by the fact that both Bill Riddle and Richard Harding put their own men and considerable machinery at Trevor's disposal, when needed.

More importantly for Trevor was the fact that Tim Sherman joined him to supervise day-to-day construction, while Matthew Maryon was appointed deputy course manager. Apart from peat, brought in to help establish root zones on the sand based greens, little else was purchased off-site.

"We recycled soil and gravel to suit our needs. We did the same with many of the young trees growing where fairways were to be laid."

Hundreds of mature trees, some of the sturdy oaks no doubt stretching back to Hardy's days of

riding the Dorset countryside, were woven into Howard Swan's design.

A nice touch that. When I first saw the emerging courses, in the late summer of last year, the trees gave the new fairways a comfortable, lived-in look, even though it will be many more months before the final 18-holes have matured and been groomed to play.

Parallel to the ongoing work on the Parklands Course, plans were set into motion to install automatic watering essential to germination and subsequent establishment. The system, serving greens and tees, was designed and installed by ISS, the Salisbury-based Toro irrigation specialists. Richard Parsons, who charted the system's design, also kept an eye on installation work which, by the very nature of construction, had to be progressed on a hole-by-hole basis.

"That makes for a very long drawn-out process," chipped in ISS boss, Gary Parker, "But the whole picture changed completely when we moved onto the Lower course."

Set in the lower reaches of the