

GOLF COURSE MANAGEMENT: WORK DIARY - JULY 2013

Overview

Although last month was not a 'flaming' June, it was a considerable improvement from last year; a time when most of the UK suffered from high levels of rainfall and some serious flooding. This year, rainfall totals have varied considerably, with the southern half of the UK generally being quite dry, but with more rain in the north. June was also characterised by fluctuating temperatures, high levels of humidity and 'autumnal' strength winds. This is all very unusual and continuing the recent trends of unpredictable weather patterns. For a short while, growth was fairly strong as soil moisture and increased temperatures provided favourable conditions.



Golfers enjoying putting on firm and smooth surfaces on this links course

However, it was another challenging month for course managers who frequently had to change plans due to high winds and periodic rain: being flexible was the key! Disease pressure has been higher than normal this year, with *Fusarium* 'lurking' on courses where air flow and shade are more common. The late *poa annua* seed head proliferation finally weakened by the end of the month and allowed putting surfaces to gather pace and smoothness. Weed control was also a key requirement for many but calm days for spraying were few and far between, thus highlighting the benefit for those who have invested in shrouded booms. July looks likely to start with a short period of unsettled weather before settling down again, which has been a fairly typical pattern for the last few weeks. Growth has probably just about 'peaked' now, so unless it is constantly wet, there should be a general 'slow-down' on most courses. July is usually a month for long periods of sunshine but since 2006, there have been four occasions when it has been cool and wet. Not great odds but then it has been nearly a decade since the UK experienced a hot and dry summer. Golf courses in general are in good shape with no major turf stress from drought, heat or flood being reported. With the Open Championship being fully televised later this month from Muirfield, golfers will expect their own courses to be in peak playing condition, therefore work in July should focus on surface preparation, course presentation and playing quality. Any turf renovation work should be minimal, with the aim of providing as least surface disruption as possible unless there are strong agronomic reasons for tackling underlying problems.

Greens

Maintaining smoothness and consistency of putting surfaces with good pace will be the main criteria as the golfing season reaches mid-way. Irrespective of prevailing conditions, golfers expect to be playing on perfectly prepared surfaces with good and consistent ball roll. Routine practices will largely continue as before with mowing carried out 6 to 7 days per week at around the typical 3.5 to 4mm HOC. With the emphasis on putting quality while guarding against drought stress, a number of practices will have to be 'juggled' as to the needs of both golfer and turfgrass. High soil temperatures, ie above 18° Celsius will start to reduce the plant's ability to photosynthesise, which in turn can lead to additional turf stress. Therefore physical practices such as grooming and verticutting may have to be curtailed while brushing, sarel rolling and hand watering are increased. The use of seaweed extracts which are full of cytokinins (plant hormones) help the plant through



Hand watering: an essential practice for maintaining adequate levels of soil moisture

periods of stress by restoring the balance in chlorophyll content. The use of wetting agents following light aerifying of the surface will help to cool the surface as well as supplying adequate moisture to the roots. Ridges and higher 'shoulders' around the perimeter of many greens are particularly prone to drought stress and as such will require more intensive management. During hot periods, there can also be a build-up of carbon dioxide in the root-zone and needle, star or micro-tining will effectively

Greens - continued

'vent' the soil, allowing oxygen to reach the roots. Applying a plant growth regulator (PGR) such as Primo Maxx will help divert the plant's energy towards the roots thus reducing the amount of water that is required as well as improving turf density. A small amount of nutrient added to the tank mix is generally regarded as 'best practice'. More course managers are opting to apply a PGR every two weeks at half rate to give more consistent growth control. Should conditions be less stressful then work to the greens in July will largely be a continuation from that carried out previously. Additional rolling may negate the need for daily mowing and should temperatures remain high, then raising the HOC by 0.5mm may be required. Where putting surfaces are composed largely of Poa Annua, then anthracnose foliar blight may develop. High soil temperatures and damp surfaces can exacerbate the situation and if greens are prone to such attacks, then it is important to reduce the risk of this stress related disease. Cultural control methods include maintaining adequate fertility, avoiding dry patch or drought stress and alleviating compaction. If chemical prevention is required, then applying a mix of the active ingredients Strobilurin and Chlorothalonil along with an adjuvant will help to protect the turf from further damage. The use of Phosphite added to a foliar feed tank mix can also be beneficial since this can act as a mild fungicide.

Tees

When growing conditions are good, mowing 2 or 3 times per week with a ride-on triple at around 12 mm will be the norm for most courses. Few courses walk mow tees since this is more time consuming but on raised, smaller tees, there may be little alternative. On tees smaller than 50m², care should be taken as to turning, since tyre marking can easily develop since there is little scope for varying direction. With playing levels high, daily movement of tee markers and the playing areas regularly divoted will be the other main criteria. Any additional watering should be sufficient to aid recovery and maintain turf vigour, but largely aimed at developing a good root structure. Presentation should be high on the agenda and this will include blowing debris and broken tees clear of the playing surface, emptying litter bins, filling ball washers and maintaining all accessories in clean condition. A good practice is to use a small spray cleaner to clean the surfaces before being wiped clean. It is a small 'attention to detail' routine but it can make a difference. By mid summer, nutrient levels may be on the low side therefore applying a foliar mix of low N, high K mixed with a PGR, will give turf the required mid-season boost. Tees composed of a high sand root-zone may require a higher level feed and if no irrigation is available for tees, then consider using a wetting agent on a monthly basis. Should drought conditions prevail then raise the HOC, top dress with a compost mix, apply a wetting agent and irrigate as best as possible.

Surrounds

Other than mowing once or twice each week, it is unlikely that any additional work will be required this month. Greens surrounds nowadays are largely mown with lightweight triples which can negotiate banks and mow close to bunker edges without any risk from 'scalping' or tyre damage. HOC should remain at around 35mm unless there is a need to mow closer to accentuate swales that may form part of the greens surround. Weaker areas should be dressed or 'divoted' and nutrient levels sufficient for adequate growth. Any remaining weeds such as clover can be controlled using a broad spectrum selective herbicide but only if the turf is not drought stressed. For those courses with no automatic irrigation to front approaches, the use of hose pipe and sprinkler may be required but usage in this area will remain a question of priority.

Fairways

Depending on which part of the country, fairways will either show good growth and definition this month, while others may start to take on a drier appearance with shades of light green and brown being the norm. It is quality that counts, not colour and the latter is perhaps more typical of the UK in summer. Mowing is normally slightly less frequent than in June but the HOC will remain the same with most courses settling for between 13mm and 16mm. A minor 'nuisance' sometimes encountered is long stalks of grass that tend to get folded over instead of being cut. A monthly pass with a rotary mower set at about 30mm height will eliminate these unsightly stalks. If time



The benefits of having a shrouded boom for spraying in windy conditions

Fairways - continued

permits, the worst affected areas for divots should be tackled, ie lay up holes or where a short iron is played uphill or over a water feature. Divoting parties involving juniors or other members often works well and the lure of a pizza and a beer afterwards usually guarantees sufficient numbers. If further weed control is required then this can be carried out, although by July it is more likely to be limited to selected areas only and as part of the drive to use less pesticides. For those courses with irrigation, again it is a case of adding sufficient water for the benefit of the turf and not the golfer. Courses that require frequent fairway mowing to keep pace with growth can use a PGR to reduce the time spent while helping to produce a denser sward. The cost of the product needs to be balanced against savings in labour, fuel and equipment wear, therefore being prepared is essential for good management.

Roughs

By the end of July, the frequency of mowing should have eased, particularly in areas of the main semi rough which should continue to be cut at the standard 50mm HOC. Where present, the narrow band of intermediate rough should still be cut weekly unless there is insufficient growth. Areas of deeper rough may now be ready for cutting with a flail type unit. Ideally this should be collected, especially if a selective herbicide has been applied the previous month. Removing the clippings will help to lower the nutrient level within these areas, thus giving the finer leaved grasses more chance of survival at the expense of many coarser agricultural style grasses. By 'thinning' out the sward, there may ultimately be less likelihood of lost ball searches. July is also a good month for controlling clover in the rough, this weed being more common on nutrient hungry and on alkaline soils but again this work may be weather dependent.

Bunkers

During mid-summer, raking either via machine or by hand, should be carried out on most days, although this will depend upon staffing levels and the number of bunkers present. Edging, trimming and removal of stone will be an on-going requirement, along with the re-distribution of sand to ensure an adequate and consistent depth. During periods without rain, steep sand faces may become exposed and as such weed and stone may emerge. This will require constant pushing of sand back up the face and in some cases it may be necessary to water the sand if connection points are nearby. The reverse of course could also happen if recent high rainfall continues. Mixing a PGR with both a low N feed and selective herbicide may be a good exercise for some if the bankings are both weedy and lacking in nutrient. Yellow suckling clover can be a troublesome weed around bunkers and is fairly common throughout courses in the south of England, especially on higher pH soils. Removing sand from grass faces or from revetted turf on links courses via a hand held blower is also likely to feature high on the weekly routine.



LEFT: Re-distributing sand after a summer wash-out.

RIGHT: A good balanced management of rough areas

Other

Lakes/Ponds/Ditches: General strimming and tidiness will be an on-going requirement during July along with further control of algae if deemed necessary in ponds and lakes. Manual removal of weed and algae may be appropriate if this can be tackled safely and the water features in question are fairly small. With water levels likely to be low and temperatures on the increase, oxygen may be in limited supply therefore the risk of weed and algae is increased.

Paths: Control of weeds via an application of glyphosate may be required along with areas of steps and around ball washers, bins, signage etc. Again this is largely an 'attention to detail' issue. Top up pot-holes as required with the appropriate path dressing and consolidate after using either a roller or more likely a 'wacker plate'.

Watchlist:

Disease: Three diseases, Red Thread, Take-All Patch and Anthracnose Foliar Blight may be apparent in July. The former is more a sign of nitrogen levels being too low and can easily be corrected by applying a foliar feed with a small amount of Nitrogen. Take all Patch may be a problem if there is a sudden change in pH of the root-zone. Check water quality and sand dressings as a first stage and acidify the surface if necessary. If the problem persists or the risk is high then apply a fungicide containing Azoxystrobin or Trifloxystrobin. Anthracnose Foliar Blight is listed under 'greens' and potentially the most damaging of those mentioned but just to re-iterate, it is a condition that is largely due to plant stress, therefore address the underlying problem.

Pests: On the increase in the UK is the presence of the chafer beetle. It is the larvae however that tend to be the problem and as it emerges from its pupae stage, it feeds on the roots of the grass, thus weakening the plant. Crows and badgers regard the chafer grub as a delicacy and large areas of turf can effectively be ripped up since there is little root depth left to anchor the grass. Control can be made via Merit Turf containing Imidacloprid, which is currently the only approved product on the market for controlling this unwelcome pest. Being available only in powder form at present, it is not the easiest product to apply if large areas need to be treated. The best time for application is generally early summer therefore a July application needs to be as soon as possible. Much has been written recently on Nematodes and the effect varying species are having on turf. Nematode damage needs firstly to be verified that it is in fact present before working out what to do to reduce the damage being inflicted. It is generally a sign that the plant is under stress and less able to ward-off attacks. Therefore and is often the case, the overall management of the turf needs to be reviewed to limit further attacks. Some turf managers have gained success by using garlic spray or bio-mass sugar but as yet there is no clear answer. Maintaining healthy turf should therefore be at the forefront of maintenance strategy.

Turf Disorders: Drought stress and dry patch are likely to be the main concerns as high soil temperatures can cause stress to the turf. Applying wetting agent must be in conjunction with other practices such as micro-tining, raising the HOC and thoroughly watering the affected areas on a regular basis. A check should also be made on fertiliser applications since those containing a high salt index such as Sulphate of Ammonia will further reduce moisture content therefore should be avoided at this time of year.



Weed control: Another good month for controlling unwanted weeds, this time more likely to be targeted in areas of semi and deep rough. As before, it is best to apply a mix of active ingredients to give different modes of action; Clover, dandelion and thistle likely to be the main targets.

Equipment: Servicing and checking of equipment to continue, with an emphasis placed on hydraulic pipes, valves, safety switches and cutting units. Ensure that a check out and check in procedure is in place to minimise the risk of machine failure and hydraulic leaks and that machinery is cleaned & re-fuelled after use.

Irrigation: Depending on the level of usage, regular checks on performance and even coverage are essential. All sprinkler heads and valves need to be checked on a regular basis and any dry or 'missed' areas acted upon immediately to prevent drought stress and eventual dry patch from forming. The system also needs to be checked both automatically and manually every so often. Any leaks should be noted and if not urgent, left until a day when the system is not in use. Mid-summer is also a useful time to review the performance of ageing systems.

Stock Control: Continue to keep a check on machine parts, irrigation joints, wetting agent, turf conditioners and so on, replacing those that have been used.