arch, April and May can often be difficult months for golf greens, really good growing weather in ig so often being tantalizingly slow to arrive. By June and July the greens are usually at their best; the weather is warm enough for the grass to be growing vigorously, and water in dry periods is rarely a limiting factor since golf courses without irrigation systems for the greens are very few and far between these days. Mowing of sufficient intensity to cope with the summer growth is the primary job. Mowing techniques were discussed in some detail in a previous article of this series; suffice it to repeat here that mowing should be frequentonce a day is not too often when the grass is growing well-and it should never be closer than 5 mm (3/16 in.). To side-track here for a moment, one can put in a plea for prompt removal of grass clippings to a central point for rotting down before they are put into the compost heap, disposed of to club members as garden manure or used for any other purpose. The rather sordid half-decomposed pile of mowings which is to be seen sometimes in the rough behind the green is not only an eyesore, but sometimes a source of extreme exasperation to the less expert golfer if his ball buries itself into it.

A necessary combination

Allied to the mowing should go regular fairly gentle scarifying, and together the two will produce really true putting surfaces on a green which is basically good. The regular scarifying will help to prevent undue fibre development and the mowing and scarifying will even combine to check the spread of certain coarse grasses like Yorkshire fog and creeping soft-grass; if they do not get rid of them altogether, they will at any rate fine them down to such an extent that only their lighter colour betrays them, and they will have no adverse effect on the putting surface.

Summer is a testing time on the course

By D.F. Boocock The Sports Turf Research Institute



Scarifying reels

Frequent light scarifying is very easy now on the steadily increasing number of courses which use the triple greens mowers made by Ransomes, Toro or Jacobsen, for which scarifying accessories are available. Scarifying once every 7-10 days is quite a feasible proposition during periods of good growth. Good growing conditions for any sort of scarifying are always essential; when grass has been scarified, particularly with vertical cutting machinery, and then mown, it needs to recover quickly from what amounts really to a 'short top and sides'!

Self-propelled machines of the vertical cutting type are also perfectly suitable for routine light scarifying, but as they do not cover the ground as quickly as triple greens mowers with scarifying reels the self-propelled machines can not as a rule be used quite so often. They come into their own, however, in the autumn, for the deeper scarification for which the triple reels were not designed.

Another type of light scarifying (though not based on the vertical cutting principle) can be provided by steel rakes and by brushes. When these are fitted on the 'turf maintenance systems' (the Hydromain and the Cushman) they are a quite effective means for frequent light scarifying or grooming. Rakes and combs are also available for fitting between front roller and cutting cylinder of various models of mower and provide an additional form of light scarifying which can be quite useful.

Aeration

Spiking of greens should continue all the year round as far as is practicable, summer included, but in dry weather it is best to stop spiking, or at any rate to

use solid rather than slitting tines since there is less risk of drying out round the top of the hole made by the tine. Brown dry patches are apt to appear on greens at this time of year, and once the soil dries out it is not easy to re-wet, especially if the turf is rather fibrous. Close solid forking of the brown patches is worthwhile, and in some cases it helps to follow up forking by watering on a solution of a suitable wetting agent. Normal irrigation of the whole green should then follow.

Spreading wear

Golf greens come under considerable pressure during a fine summer, with much play on them. It is very necessary, therefore, to spread the wear as widely as possible and to use as much of the area of the green for pin positions as the



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surface will allow. Sometimes a green is so undulating or bumpy that there are only two or three places flat enough for cutting the hole for the pin. This is not a happy situation, and a green like this should be earmarked for lifting and relaying eventually to provide a more suitable surface. New holes should be cut constantly, and as soon as the grass begins to show any sign of wear round the pin hole it is time to cut another hole in a fresh part of the green. Three or four new holes cut each week is by no means over-doing things when play is heavy. And, of course, the newly-cut plug should be carefully replaced to the old hole, exactly flush with the surface of the green so that the grass is not skinned next time the green is mown. Beware of putting back inferior turf in the old hole. Yorkshire fog for example can be spread around a green in next to no time in this fashion.

Quality of surrounds

Surrounds should receive similar treatment to that given to the greens, and really the only difference between the *immediate* surrounds and the green should be in the height of cut. Apart from the benefit to the golfer, this is also helpful if, as happens sometimes, the edge of the green tends to 'ebb and flow' to some extent, whether by accident or design. If the green is extended into the surround by mowing further out, this can produce a very ugly edge to the green for some time if the turf in the surround does not match up with that of the green, and if the levels are not true.

Summer can be a testing time for bunkers; dry weather causes the grass to die back around the tops where it is particularly vulnerable, whilst rabbits, foxes, stray dogs and children from the



nearby housing estate make their contribution to undermining and erosion. General repair work must wait until the autumn, but if the growth of weeds and weed grasses in the sand outpaces the bunker maintenance work at a busy time they may be controlled in summer with a suitable weedkiller, and glyphosate (sold now by May and Baker) is almost ideal for this job since it will kill broadleaved weeds and grass weeds (even grasses with rhizomes like couch) and vet is inactivated on the bunker sand as soon as it has dried. Therefore explosive shots out of bunkers, scattering sand on to green or fairway, are not likely to cause damage after the bunker sand has been spraved with glyphosate.

Tee renovation

Tees, like greens, will suffer badly if all the wear is concentrated on one or two places instead of being distributed fairly evenly over the whole area. It is important therefore to move the markers regularly and progressively along the tee to a new position, and obviously the larger the tee the better, from the point of view of wear distribution. After the markers have been moved, divot holes should be trued up with sandy topsoil in which grass seed containing good cultivars of suitable grass species has been mixed. (It is not advisable to replace divots on tees since this can produce irregularities in the surface.) The success of this summer seed renovation is variable, depending on whether the tees can be watered in dry weather and also to some extent on the exposure to wind, especially on coastal golf links.

It is rather surprising to find on one's advisory rounds that there are still tees on a number of golf courses where mowing is done regularly without a box on the mower, and clippings are returned to the tee. One of the most necessary attributes of a tee is a firm surface, and the regular return of the grass clippings, in addition to favouring the spread of weeds and the proliferation of worm casts, makes the surface soft. Mowing without a box is, as a rule, not due to lack of appreciation of the consequences, but to lack of time or the fact that the tee mower does not have a box (or boxes). Neither of these problems is incapable of solution and it is mainly a question of cash.

Fairway maintenance

Finally, a word or two about the fairways. At this time of year mowing and periodic 'divoting', that is to say replacing divots and filling in divot holes and scrapes with a soil/seed mixture, are the main requirements in the way of maintenance. Golfers are often blamed for not replacing divots when really the culprit is a rook or crow which picks the divot up again after the golfer has dutifully fitted it back.

There is sometimes, especially at seaside links courses, the odd fairway or two where there is very little soil over sand perhaps just one or two inches or so. A dry summer really hits fairways like these, and the turf becomes so dry and brown that one wonders whether it will ever recover. Recover it does usually, but it is never sufficiently compact and uniform to provide good lies. On one or two of the links in the south of England a grass making a substantial contribution to the sward is bulbous meadow-grass, which dies right back in a dry summer, new stems and leaves being produced from the bulb in the autumn to give a much improved cover of grass for the fairway during the winter. This, in fact, is the grass which was grown a long time ago on the greens of some of the golf courses in the Riviera-at Cannes for instancewhen golf used to be played only during the winter. The performance of the grass in the summer was irrelevant.

Watering of fairways would have caused hands to be raised in horror 20 to 30 years ago but there is no doubt that *discriminating* watering of these very sandy fairways keeps the grass growing when there is no rain, without changing the botanical composition of the turf for the worse; and there is a strong case for the installation of a few pop-up sprinklers, at any rate in the more strategically important areas. The accent though should be very much on 'discrimination', the turf being watered just sufficiently to prevent it wilting and no more.

STRONG SUPPORT FOR VANCOUVER CONFERENCE

By Kevin Munt

It was my recent good fortune to have the opportunity to attend the 32nd Annual Canadian Turfgrass Conference held in Vancouver in March. This conference was a real education for a number of reasons, firstly the conference was an exercise in excellent organisation and coordination, secondly the whole affair was conducted with a nice balance of friendship and learning.

Including a two day 36 hole preconference golf tournament the show covered six days and over 60 greenkeepers teed-off for the two days of golf. These were joined by a further 600 registerants and their wives for the Conference. All these people stayed in the 5-star Hyatt Regency Hotel which was also the venue for the Conference. This created a marvellous holiday atmosphere. Every time I stepped into a lift or went for a drink in the bar, I met someone wearing the conference ID badge, so straight away I had something in common. This also made me feel that I was part of something large and important in the Turfgrass world. The North American Superintendant realises he is an important person in golf and that a Conference of this proportion is vital to his education and standing in that world. (So does his Club).

Not only did I learn alot about golf greenkeeping and running a conference

for a large Association, I received a good golf lesson in the Tournament. I was drawn off the first tee with the Presidents of the Canadian and United States Superintendents Associations and it was a nerve racking experience. The golf tournament was a very good ice-breaker for some of the early registerants and it gave us all a chance to get over the travel weariness, I say all of us because some people traveled 4000 miles from the east coast to attend their National Conference.

After the two days of golf we enjoyed a free day to enjoy the sights of Vancouver. It is the most beautiful city I have ever seen and a marvellous place to hold a conference.

On the night before the conference started 500 people attended a cheese and wine party hosted by British Columbia Golf Superintendents Association. British Columbia was the host province for the Show. This was the first of three great evenings that followed each days lectures. The second evening was known as the 'Rainbird Bash'. This was a real let your hair down session which included a large seafood spread and beer all night laid on by Rainbird Irrigation. They also ran

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