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The Sports Field Range
- 'Longlife' Spring and Summer 11:6:9 + 1% Mg
- 'Longlife' Autumn Feed 10:10:15
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'Longlife' Plus contains 2,4-D and dicamba.

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INTERCHANGEABLE SYSTEM
FERTILIZER FOR FINE TURF

- Longlife Spring & Summer: 14.3.7 + Didin + Mg + seaweed extract
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- Longlife Autumn Feed: 5.5.15 + Mg + Fe + seaweed extract

FERTILIZER FOR SPORTS FIELDS

- Longlife Spring & Summer: 11.6.9 + Didin + Mg + seaweed extract
- Longlife Autumn Feed: 10.10.15 + Didin + seaweed extract
- Longlife Nitrogen: 25.0.0 + Didin + Mg + seaweed extract
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Used of nitrogen due to less leaching. "We realised at an early stage the importance of slowing down the release of nitrogen so that the plant could utilise this valuable nutrient at the time it was needed. We understood the importance of slowing down the leaching process, reducing the release of nitrates into the soil and water profile. Both IBDU and Didin were available but we considered that Didin offered many advantages over IBDU. Reasons for deciding in the favour were many:

1. Didin activity is temperature dependent therefore as the temperature rises and the turf is growing more rapidly additional nitrogen becomes available under these conditions.
2. Didin offers the advantage of releasing nitrogen over a time scale which parallels the growth patterns of the plant. Greenkeepers and groundsman can retain a higher level of nutritional control over a period of time.
3. Didin is economically priced which allows Longlife to be extremely competitive against IBDU slow release products and conventional fertilizers.
4. The action of Didin is specific to only one bacteria, Nitrosomonas and therefore will not cause thatch build-up by delaying the natural decomposition of organic matter.
5. Finally, and particularly relevant in these environmentally sensitive times 'Didin' significantly reduces nitrate leaching. Didin is now well into a long term trials programme at the Sports Turf Research Institute and preliminary results have shown significant differences with comparable products included in the trials.

Another major feature of Longlife fertilizers is in its physical formulation," comments Steve Hall, ICI's Product Manager for Longlife fertilizers. "The Longlife granule is a compound fertilizers have the nitrification stabilizer as well as the other nutrients in each granule. Blends, however will cause "speckling" due to the variation of nutrients in each granule and the different release rates of the various nitrogen sources. The granule itself is of high quality with excellent spreadability. Both the size of the granule and its quick breakdown will ensure minimal mower pick-up.

A comment expressed by many greenkeepers, groundsman as well as the trade is "why so cheap when compared with other slow release products?"

The reason says Steve Hall is simple. "The production costs are lower. As ICI is a major fertilizer manufacturer and the manufacture of Longlife is in the UK this saving can be passed onto the end-user. ICI offer a free soil analysis service to all Longlife customers. This service facility conducted at ICI's Jealotts Hill research station, the largest of its kind in Europe, tests 80-90,000 soil samples each year covering agriculture, horticulture and the turf industry. Soil analysis is very important to the greenkeeper and groundsman as it enable a high level of management control to be undertaken. This is particularly highlighted in sand based greens where phosphate and potash levels need continual monitoring."
A GREENKEEPER’S VIEW OF THE 1989 EUROPEAN OPEN AT WALTON HEATH

The preparation and work for Clive Osgood, head greenkeeper at Walton Heath starts long before 1989 and works up through the months to the week.

August had no rain and drying out, days were long, hand watering avoiding members and societies every day. The lads getting used to hand mowing again. Who cut that one?! Was he drunk?! Plus all the other things that go with a big tournament.

The lorries arrive, tents, stands, track, way, fork lifts running all over the place, if they have their way. TV cables and stands go up, it doesn’t look like our course anymore. Still the members and societies play, sometimes over the heads of the erectors. Play is stopped on the first of the new and 18th of the old.

Now we are working in the early mornings and at night working to get it right for the players and the TV.

Day One - Thursday

Start mowing at 5.30 am. I take the mowers and lads out on the tractor and trailer keeping them leapingfrogging and waking them up. Lovely sunrise, very peaceful and quiet but no time to stop, all the last minute touches to be done. All mowed, greens, tees, surrounds, holed and pins out, have breakfast and clean and adjust mowers ready for the next cut in the evening. Stakes on the tractor and trailer kept everything in the workshop to rest for the wicked.

Now we are in the workshop in the early mornings and at night working to get it right for the players and the TV.

Day Two - Friday

It’s 5.30 am again so off we go. Someone running about the course shouting for me, he’s bent his bottom blade and needs the spare mower which is back in the workshop. Have to carry the spares on the trailer from now on. Fit new blade and check the other mowers etc ready for the evening. In the evening they allow me to cut one green to beat the dark. Now I’m a greenkeeper and the mickey taking starts.

Day Three - Saturday

They tell me it’s Saturday. Dark and misty, waiting for daylight so we can get going, it comes at 6.10 am and tee off is at 7 am. We’ve got to move fast today. I have to help them cutting today, and it’s my turn to take the mickey.

Smaller field today so we start the evening cut earlier and all finished by 7.30 pm. My wife says, ‘What am I doing home, was it a half day?’

Day Four - Sunday

Up with the dark! I mean lark!! Off we go, last cut and its raining. Panic, I’ve got foam coming out of the green as I cut, check the machine, I’m not a greenkeeper after all, what do they do out here? I know, wetting agent, carry on and it’s all done again. Check machines and clean them off and then go back to some that last, to see the winner Andrew Murray come home.

It was good to be one of the team, some moans, very tiring but lots of laughs. Great bunch of lads. We won anyway, the course was great.

Monday

Off we go again, mowing the other course, tees and surrounds, members out at 8 am. Fencing, ropes and stakes to take down, miles of it and everything in the workshop to sort out.

Tuesday

Mowing and fencing again but it’s our day, The Walton Heath Greenkeepers Championship over the tournament course 7111 yds par 72. Ten of us play, even Clive the Head Greenkeeper. Prizes are awarded by Nick Hill of Birchgray and our Club Pro Ken McPherson. Boy was it tough. The winner, you truly, giving the lads 25 years at least and a beating. Net 73 off 19 handicap, my day and I won’t let them forget. We soon opened the champagne and toasted the champion.

Wednesday

The patter of spikes pass my workshop. Societies out again, 90 way and 80 tomorrow. No rest for the wicked.

TED JAMES BOND

BERKS, BUCKS AND OXON SECTION

The Berks Bucks & Oxon Section’s Christmas “Bring and Win” competition was held at Whiteleaf Golf Club, Bucks, on Thursday December 7, 1989. The event was a nine hole Stableford and tee’d off at midday. Everyone taking part won a prize, with the exception of the overall winner who also took home a fine turkey. The top three winners of the day were as follows: 1st, D. Summern (Badgemore Park Golf Club), 2nd R. Clarke (Temple Golf Club) and 3rd B. Holt (Burford Golf Club).

A very good turnout made for a very enjoyable day.

Also held at the same venue was an annual A.G.M. Your committee members for the forthcoming year remain the same as those elected for 1989. The committee would like to express their thankfulness for the following: Jim Sutherland (Head Greenkeeper) for the use of his course for our event. The steward, Mr Whalley, and his staff for keeping the bar open and the Secretary and Committee of Whiteleaf Golf Club.

For providing extra prizes for our competition we thank CMW for the turkey, Riseborough Turf Supplies for the Christmas puddings and Max Wart (Headgreenkeeper) for the use of his course for our event.

On a final note, congratulations are due to be awarded to Paul Malia (Fackwell Heath Golf Club) for reaching the final of the 1989 Iseki National Greenkeepers Tournament held at Moor Allerton Golf Club, North Yorkshire. Paul received an award for winning the over 55’s part of the competition. Well done.

HARVEY TRIBE

AYRSHIRE SECTION

The highlight of the month was the annual games night, which was held in the Ardeer Golf Club’s excellent clubhouse.

Things got off to a great start when it was discovered the doorbell had been stolen, and the bowls were locked in a cupboard, but section secretary Jim Paton drove ten miles to borrow bowls, and the club kindly let us use the snooker table normally reserved for members.

After an evening full of the festive spirit (and also not a little beer), the results were as follows:


The pictures shows all the members hanging out together, a good turn out to celebrate the end of the season. The event was held on December 7, 1989. Well done. We soon opened the champagne and toasted the top three winners of the day.

DUNCAN GRAY

NORTHERN SECTION

The final event of the 80’s the Christmas golf at South Leeds Golf Club was almost, but not quite, a flop.

On opening the bedroom curtains to be greeted by a layer of ‘white stuff’ the day took on a bleak appearance. Many people who had booked to play turned up and stayed for the meal and, even better, some hung about after-birds and booze. To finish, on behalf of the Ayrshire Section I would like to wish the rest of the BIGGA membership a happy and successful new year.

BOB LUPTON
**Around the Green**

**Devon and Cornwall Section**

Our Christmas meeting was held at the now traditional venue of Okehampton Golf Club on Wednesday, December 13. First event of the day was the greensome stableford golf competition with the players competing for the P.J. Flegg Trophy.

The non-golfers enjoyed a course walk to gain their appetite for the superb Christmas dinner waiting for them on their return to the clubhouse.

Golf results: 1st R. Whyman & B. Ridgeway, 2nd K. Brown & A. Cann and 3rd K. Broad & M. Oliver. After the Christmas dinner we held the raffle for the Okehampton Golf Club on their excellent facilities. Thanks to Richard Wisdom and his dinner we held the raffle for the W.A. Cann & 3rd K. Broad & return to the clubhouse.

This was followed by this year’s entertainer the very popular Jethro. As usual he had us all in stitches, but there was a surprise addition to the entertainment especially for Dick Parr who was arrested by a WPC stripogram who took up many hours work. We must go to Walter Woods for his great contribution on our behalf as one of our Board of Management representatives. Our thanks must go to Walter Woods for his great contribution on our behalf as one of our Board Members since the inauguration of B.I.G.G.A. We would like to think that Walter will still be sorely missed here in the Scottish Region for 1990/91 is Harry Diamond, Ayr Belleisle Golf Club. A very well known personality in Scottish Greenkeeping for many (many?) years. Harry will have as his Vice-President, John Crawford, the new Course Manager at Haggs Castle Golf Club.

The same two people are also our Board of Management representatives. Our thanks must go to Walter Woods for his great contribution on our behalf as one of our Board Members since the inauguration of B.I.G.G.A. We would like to think that Walter will still have a special role to play for B.I.G.G.A. as a whole in the coming years.

We were sorry to hear that Willie Blair the hard working Secretary of the East Section, has been seriously ill, however we are pleased to hear that he is on the mend and we send him all our best wishes.

**Gordon Moir**

**Scottish Region**

The Scottish Region congratulates Chris Kennedy on his new appointment at Wentworth. In Chris we have lost one of the hardest workers for Scottish Greenkeepers and greenkeeping as a whole. No doubt once he establishes himself in his new job he will be back fighting the cause. Just a young man!! he has been on greenkeeping association committees for more than 20 years, starting as a young man on the West Section committees and working up to be President of S.I.G.G.A. and latterly as Scottish Region Administrator for B.I.G.G.A. He will be sorely missed here in Scotland. Executive meetings won’t be the same without his dry humour and wry comments and the famous “Kennedy Bunnet” will no longer be seen at Region outings.

We must also thank Chris’s wife Joan who has been in the Scottish office since it began first working with Joe McKean and then with Chris, dealing with all our many queries and moans with her usual cheeriness and supporting the Scottish Region committee at official functions and events.

Before any big event Joan was also tireless in helping Chris with the organisation which took up many hours work. We will miss them both very much and we wish them and their little daughter Suzanne ‘Guid Luck’ in their new venture.

As from January 1990 I am the new Administrator for the Scottish Region. All Scottish Region business will now be directed to me at my home address, 2 Castle Park, Kincardine-on-Forth, By Alloa, FK10 4QH. The Scottish Region telephone number is now 0259-31445. My wife, Edna, will be on hand most of the time to deal with any calls or enquiries.

The new President of the Scottish Region for 1990/91 is Harry Diamond, Ayr Belleisle Golf Club. A very well known personality in Scottish Greenkeeping for many (many?) years. Harry will have as his Vice-President, John Crawford, the new Course Manager at Haggs Castle Golf Club.

The same two people are also our Board of Management representatives. Our thanks must go to Walter Woods for his great contribution on our behalf as one of our Board Members since the inauguration of B.I.G.G.A. We would like to think that Walter will still have a special role to play for B.I.G.G.A. as a whole in the coming years.

We were sorry to hear that Willie Blair the hard working Secretary of the East Section, has been seriously ill, however we are pleased to hear that he is on the mend and we send him all our best wishes.

**Elliott R. Small**

**Scottish North Section**

Congratulations to Neil Metcalf currently first assistant at Cruden Bay Golf Club who takes up a similar position at Crieff Golf Club on March 7. Also Stuart MacGregor originally from Parnure and Arbroath who has returned from exile in Redcar, to take over at Forfar, and Derick Cowans who is the new head greenkeeper at Ballater.

**Gordon Moir**

**North East Section**

Spring Competition - Alnemouth G.C. (Fosston Hall) April 26, 9.30 a.m. Match vs East of Scotland October 9 (Conset). Autumn Competition T.B.A.

Congratulations to Steve Pope on completing 30 years service to Tyneside G.C.

On January 9, in conjunction with Kirtlington Hall College of Agriculture, a seminar was held on the subject of drainage. A good attendance of around 60听了 many greenkeepers and groundsmen attended travelling from as far as Carlisle and the Isle of Man.

Speakers were of a very high standard first speaker being Mr Howard Swan, his subject: “You don’t play golf in Wellingtons!”. Very excellent!

Thanks must go to Dr R. Parlane and Mr Attwood for their excellent programme of speakers throughout the day. Unfortunately we were not able to have many greenkeepers or chairmen greens committees in attendance but it was nice to see Mr O. Snowdon the representing Durham Golf Union.

Should any member wish to go to Gosforth Park Golfling Complex on the target golf, greenkeepers may use their membership card as before as long as it is not abused.

**Jim Richardson**

**East Midlands Section**

We have arranged our spring and autumn tournaments for the coming year. The spring meetings is to be held at Rugby G.C. on May 17. This is also the qualifying competition for the Iseki tournament. The Iseki regional final is at Keldeston Park G.C. on June 26. The autumn meeting is to be held at the Leicesterian G.C. on September 27. Entry forms for
the singles and pairs knockout competitions will be sent out in April and it is hoped that they will be well supported. Any members who were unable to attend our A.G.M. and wish to get in touch with me about anything, may do so on Melton Mowbray (0664) 61642.

GORDON MITCHELL

SOUTH WEST SECTION

"M AD Dogs and Englishmen go out in the noon day sun" or rain as the case may be. In conditions of torrential rain and a scorching heat when you wouldn't normally see a greenkeeper for miles around there were dozens of us slogging around the links course at Castle Cary on behalf of the Beak Mice for the Veals Christmas Trophy. Experience finally showed through with John Kane the veteran player from nearby Clevedon shooting a superb 76 gross from a 6 handicap.

Everyone deserved a prize. The result is as follows:

1st J. Kane (Clevedon) 76:6:70; 2nd M. Gray (Long Ashton) 82:11:71; 3rd M. Dodd (Burnham & Berrow) 88:14:74; 4th Vic Lever (Wells) 88:17:78

1st Gross N. Pring (Wells) 76; 2nd C. Rawlings (Wells) 79. Congratulations were extended to the Weston-Super-Mare section by President Jim Fry. The small morning golf competition as follows:


The section annual general meeting followed the presentation of prizes. Reports were given by the secretary, tournament organiser and our Chairman, Ken Lodge, as regional representative for the section. Items of interest included: venues for the I.S.E.K.I. Regional Tournament at Yeovil Golf Club on June 14. Section representatives would be chosen from the section's spring tournament at Fray Golf Club on May 15.

Election of officers resulted in last year's team being re-elected with the exception of Phil Wentworth who has resigned. Nominations for this vacancy are required, names please as soon as possible. A number of points concerning the magazine were raised, and these will be taken up by your regional representatives.

Copies of the minutes for the 1989 annual general meeting are available from me upon request. Following the annual general meeting our President, Jim Fry, gave an amusing short talk on his visit last February to the G.C.S.A.A. at Anaheim. This was billed in advance as an illustrated talk. However, the illustrations turned out to be photographs rather than slides! Jim is going over again this year in the company of Eric James, so between them the section should get the illustrated part of the talk later in the year. Thank you Jim for all your help and support, and I look forward to next year's presentation.

BOB DENNIS

SOUTH WALES

WOULD like to thank Pyle & Kenfig Golf Club for giving us courtesy of their course and clubhouse for the day. Also thanks to Paul Robinson and greensstaff for putting on such a course in excellent condition and the stewardess behind the bar and kitchen staff for the wonderful food.

On Wednesday, December 3, we held our Christmas competition at Pyle and Kenfig Golf Club. The day started with everybody meeting at the club at 10.00 a.m. and then proceeding to hold A.G.M.

The meeting was well attended, probably the most that has been there for many a year. I would like to thank all that made the effort to attend.

The meeting started with the chairman, Mike Jones opening the meeting, by thanking everybody for their help throughout the year and told the meeting that he would not be able to carry on next year as he will be captain of his home club.

The two sub-committee members were selected, with the following: Education, Steven Evans, Dave Coundley and Peter lacey. Golf and Social, Robert Kitcher, Dennis Jones and Gareth Rees.

Huw Morgan told the meeting that the Education Officer, David Golding has been to a meeting at Pencoed College with the Welsh college recognising by headquarters. Dennis Archer said that the college has been rejuvenated and firms are making machines available to the college for teaching purposes.

The Welsh Golfing Union will fund greenkeepers to go to Mold but not to Pencoed. Huw Morgan asked if there were tickets allocated for the Ryder Cup to Greenkeepers, Dennis Archer said there were tickets allocated and were available at the I.O.C. show at Windsor.

Mike Wilson brought up the subject of the golf meetings and said that he thought there were too many meetings. A vote was taken and was carried by the meeting, it was proposed by Walter Jones and seconded by Robert Kitcher. The following officers were elected: Chairman Huw Morgan proposed I. Morris, seconded M. Wilson. Vicechairman Hugh Parry proposed P. Swain, seconded S. Evans. Treasurer Paul Robinson re-elected. Section Administrator Philip Swan re-elected.

The Section Administrator told the meeting that since he changed his job he sometimes could not make the meetings and would be using the other

GREENKEEPING MAGAZINE

February '90

Dennis Archer and Philip Swain were re-elected and Hugh Parry was voted on to the Board to make sure that if the Secretaries not very favour-able to not make it there would still be two people present from the section.

The fixtures for 1990 have been arranged and hopefully there will be fixture cards printed and sent out to members.

PHILIP SWAIN

KENT SECTION

NOT much to report this month, although you will have been notified of some of our forthcoming lectures. Looking forward to this year, I suppose we will soon be arranging our spring tournament at a venue yet to be decided, but for now we must concentrate on getting the winter out of the way.

Approximately 30 members attended our Turkey Trot Christmas competition at Wilderness Golf Club on Thursday December 14 (although Bernard Dibbans was all set to play on his own the day before). Thanks must go to John and his staff on the condition of the course and to the club and the catering staff for being so hospitable and laying on a super Christmas dinner.

Conditions for play on the day were not very favourable and led to some reasonably low point scores, with every point being hard earned, but at least everybody left with a prize. First choice went to Nigel Stapely on a count back over 1st L. Cruckshank, 2nd K. Ritchie, 3rd S. Stewart, 4th A. Revell, 5th A. Jones, 6th B. Lawrie, 7th S. Massam, 8th T. Peddie, 9th M. Cooper, 10th J. McAtamny.

Our thanks go to Tulliallan Golf Club for giving us the use of their clubhouse, our guests and to Canterbury Golf Club. We were reminded that there is now £109.00 in the hole in one fund for an ace in one of our competitions, and there would be no more worthy a winner of this prize than John Millen.

John devotes an enormous amount of time and effort not only in the running of the Kent Section, but also to the Association as a whole and he deserves our thanks and appreciation, which must also extend to his family for the disruption that we cause to their lives, and to Canterbury Golf Club.

PAUL COPSEY

CENTRAL SECTION

THE largest fund raising event held in the section, the Annual Prize Draw, was held at Tulliallan Golf Club, with the main prize winners resulting as follows:

1st L. Cruckshank, 2nd K. Ritchie, 3rd S. Stewart, 4th A. Revell, 5th A. Jones, 6th B. Lawrie, 7th S. Massam, 8th T. Peddie, 9th M. Cooper, 10th J. McAtamny.

Our thanks go to Tulliallan Golf Club for giving us the use of their clubhouse, our guests who helped to make the draw, everyone who attended and to those who donated prizes.

Entry forms will be reaching members soon for the Spring Tournament at Elie on the 19th April, and the Inter Club Tournament, which is run throughout the summer. It members wish to enter these competitions PLEASE return the entry form, along with the correct fee, by the date printed on the form.

As many will know I have moved from Dunfermline Golf Club to take over as Course Manager at Hagg's Castle. I will remain as Section Secretary in the meantime and my new address is 82 Dumfriess Road, Glasgow G41 9DW. Tel. 041 427 4701. If any member wishes to take a more active part in section affairs and fancy the office of Section Secretary, please get in touch with me.

Another committee member on the move is Keith Vertigan of SISIS. Keith has moved back down south. Although lost to the section committee he will not be lost from Scotland completely as he will be running the Scottish area from England, sounds familiar. Keith has served on the committee of the Central Section since it was formed in 1980 and the best wishes of every section member go to him and his family for the for the future.

KEITH CLEVERLY

"THE Association learnt with great sadness of the passing of Keith Cleverly. He was well liked and respected by many of our members and very supportive of the Greenkeeping profession. Keith was instrumental in establishing ICI's close links with BIGGA and the success of the ETME Seminar programme owes much to his in-itiative. He was good company and always enjoyed his company. At a personal level, I much appreciated his help and advice in the early days of BIGGA as he saw the need for the Association to establish firm roots for its future development. I know that I speak for all our members in offering our deepest sym-pathety to Keith's family at this sad time."

NEIL THOMAS
THE EFFECTS OF MOWING

HEIGHT AND FREQUENCY

OF CUT ON THE

QUALITY OF PUTTING

SURFACES

By David Boocock, Agronomist STRI

Background

THE appearance and quality of putting surfaces are affected by the height of cut, frequency, time of day, as well as the pattern of mowing and type of equipment that is used. From the earliest days of preparation of lawns and areas used for sports turf, it has been appreciated that regular defoliation of any herbaceous is a severe regime, and thus one simple operation eliminates a large range of potential competitors.

It restricts plant populations to dwarf growing or mat forming species such as daisy, clover and the wiry, shorter growing grasses that can survive such conditions. Amongst the grasses, such treatment tends to favour the finer fescues such as Chewings and slender creeping red, both brown top and creeping bent and annual meadow-grass. Occasionally naturally selected forms of smooth-stalked meadow-grass, ryegrass and creeping soft grasses, will persist even under close cutting.

Mowing effect

The effects of close mowing include stimulating aerial shoot growth, improving density and smaller leaf size - thinning out coarser bladed grass leaves. It also decreases root and rhizome growth and the manufacture and storage of carbohydrates. Clearly the cut leaf surfaces are potential entry points for disease organisms.

One of the basic laws of growing turf is that if grass is making height then it is not making density. It therefore follows that mowing should commence on a newly established sward as soon as the surface can take the equipment. A general rule of thumb is to remove no more than one third of the green leaf tissue at any one mowing. Allowing the grass to grow away and then cutting back severely, removing say two thirds of the green leaf, weakens and thins out the plants.

The clear implication, and well proven in both trials and practice, shows that of turf cut once, three and five times a week, the sward cut most frequently consistently produced the best quality turf, densest sward and greater number of shoots per square inch.

Mowing Height

Effective height of cut is the height of the shoots immediately after mowing. It is similar but not exactly the same as the bench setting, i.e. the mechanically measured height of cut.

All cylinder mowers ride on the top of compressed foliage so the effective mowing height will be slightly greater than the bench setting. The extent of this difference will depend on stiffness, elasticity and size of grass shoots as well as the weight of the unit and size of front and rear rollers.

When ground conditions are soft following rain or on poorly drained surfaces, or where thatch is present, the mower can sink in enough to reduce the effective mowing height - sometimes below bench setting and often responsible for scalping or scrubbing, particularly at the edges of greens.

Close mowing can thus produce a turf which is aesthetically pleasing and suitable for the game of golf, but there are disadvantages. These include the sward being less tolerant of environmental stress, more prone to disease and very dependent on good management. The shorter root system cannot draw on deeper reserves of moisture or nutrients in the soil.

The greater number of shoots are under more competitive stress and so less tolerant of heat, cold, drought, disease and foot traffic. We must therefore compromise by adjusting the height of cut to suit both the game of golf, time of year and any additional stress the sward may be under.

Height of Cut

Traditionally in our mild climate greens are topped at 5/16th in. in autumn is straightforward and simple. The grass to grow away and then cutting back severely, removing say two thirds of the green leaf, weakens and thins out the plants.

The clear implication, and well proven in both trials and practice, shows that of turf cut once, three and five times a week, the sward cut most frequently consistently produced the best quality turf, densest sward and greater number of shoots per square inch.

The reason for raising the height of cut in autumn is straightforward and simple - imagine grass as the pile on a carpet. If you start winter with a short pile, the effect of continued play is to reduce it even further through wear and abrasion, exposing grass crowns to damage, thatch or even the soil. With less "cushion" or padding, the soil beneath is exposed to the compacting effects of play and this damage results in slow recovery and growth in spring and, of course, a weak, thiner grass cover is much more prone to invasion by free-seeding species such as annual meadow-grass.

Winter cutting height has to be a compromise between what is acceptable for the game at that time of year and weakening of the plant. Topping occasionally as necessary to maintain the desired height is still important, since excess leaf cover encourages disease through creating a moister micro-climate in the leaf canopy. Taken to extremes, too close a cut will weaken and thin out the grass through shade effects and, of course, is likely to cause bleaching or result in a severe check when cut down in spring.

In summer mowing objectives are different. There must, however, be a gradual transition between winter and summer height of cut. In our uncertain spring weather, too close cutting too early frequently gives rise to problems, severely checking growth if there is a late cold spell, leading to increased wear and slower attainment of full and sustained growth.

The height of cut adopted in summer aims to provide a uniform and smooth surface of consistent pace. Heights vary slightly according to the resources available at any given club, but a general average is 3/16th in, slightly lower, to say 5/32nd in, when sustained and vigorous growth is taking place, slightly higher when there are other stress factors, e.g. problems with irrigation during drought.

Greens can, of course, be cut even closer given a thin bottom blade and smooth surface and are often consistently mown at 2/16th in. all summer, purely with a view to maintaining pace. This particularly severe regime can be detrimental long-term - or even in the short term, if additional or more severe stress factors are not taken account of.

Much depends on which grasses are the predominant species, soil type, amount of play and management skills of the greenkeeper. Generally speaking, prolonged over-close cutting such as this leads to a weaker turf, allowing moss to spread in, damage from play and invasion or further spread of annual meadow-grass.

Frequency of Cut

Practical experience and trial work over many years has shown that frequent mowing, not too closely, is far superior for both maintenance of the grass species best suited to golf, and for the game itself.
When grass is growing vigorously, daily mowing is routine, at most top class courses. Grass can put on between 1/16th and 2/16th in. leaf extension in 24 hours, most of that at night, which will dramatically alter pace and since grasses grow at different rates, there is some effect on smoothness too.

Daily mowing will eliminate these effects and present putting surfaces at as near the ideal height for play as possible.

The advent of triple mowers made such frequent cutting a practical proposition for those clubs with limited numbers of staff and certainly eases problems at the weekend when most club competitions are played.

Direction of Cut

Varying the direction of mowing is an important aspect of this routine operation. All grasses tend to develop a "grain" or "nap" if mowing is constantly carried out in one direction. This results from leaves, stems and any stolons being pushed flat by the front roller and encouraged to grow in the one direction only. Over time this will certainly affect both pace and trueness of the surface.

Since we require grass to be growing as upright as possible, the direction of mowing should be altered at every cut, usually in each of four directions in turn. This is most easily achieved using hand mowers and the distinctive pattern they produce is more striking than that of triple units. A consecutive ribbon pattern is usually adopted for each individual mowing.

Mowing with triples does present difficulties on some smaller greens, especially where some surrounds and features limit areas where turns can be made. This gives quite often opportunities for varying the direction of cut too. Wherever practical, mowers should be turned on surrounds, not the green itself, and over a wide arc rather than a sharp, spin turn which scuffs and bruises the grass leaves. Triples demand a wider turning circle and wear and tear thinning out the cover can be a problem around the edges of the putting surface. Excessive speed on the final outer trim pass is the biggest single factor in wear here. Occasionally omitting this final pass, varying the width and wheel track by raising one or other of the outer units on triples which have this facility, and hand mowing once or twice a week, all help to minimise such damage.

Speed of Putting Surface

Green speed or pace are the current buzz-words to which golfers pay far more attention than is warranted. Committees in their ignorance pursue the concept of pace on greens as if this were the only aspect that counted on putting greens, often to their long-term detriment. Far too many people have the fixed idea that pace results simply and solely from closer cutting. Many an annual meadow-grass green has been "tarted up" for A Pro-Am by shaving far too closely for a few days and the general membership have lived to regret it in succeeding weeks, if not months, as the turf struggles to recover.

Height of cut is but one aspect affecting the pace of greens and in aiming for speed we must not risk losing all-year-round playing conditions. Speed depends on a number of factors including:

1. Weather Conditions: Weather patterns are unpredictable in the UK and weather always has the final say. Heavy rain before any match will always slow greens down, and if followed by drying winds pace can improve dramatically in a matter of hours - remember Royal Lytham during the 1988 Open.

2. Species of Grass: This is possibly the most important factor. Fine-leaved fescues will always be faster and annual meadow-grass greens the slowest.

3. Height of Cut: Shaving greens will speed them up for a time, but this kills fescue very quickly. Agrostis is rather less affected, but is weakened and opened up, thus letting free seeding annual meadow-grass spread and eventually dominate.

4. Frequency of Cut: Cutting 7 days a week at a sensible height gives far quicker greens than mowing alternate days and avoids the need for over-close cutting.

5. Grooming: Regular light grooming which helps keep surface nap to the minimum is useful once or twice a week during the growing season, as too is combing or brushing.

6. Verticutting: Surface thatch, fluffiness, straggly flattened stems, are all inimical to pace. Verticutting helps to maintain upright growth and carried out at a light setting once a week, provided growth is satisfactory, can improve pace quite noticeably. Trials have shown increases in pace of as much as 1 foot over stimp-meter readings of 7 foot before verticutting.

7. Drying greens out: Clearly dangerous if drying out goes beyond the point where it becomes difficult to restore permeability.

8. Lean greenkeeping: Referring to minimal use of both fertilizer and water - thus indirectly encouraging the finer grasses and avoiding the lushness and seeding of annual meadow-grass which slows greens up dramatically.

These points clearly show the dangers of going for excessively slick greens for a major event and risking their condition the rest of the year. The aim must be to keep blades to about 3/16th in. for most of the growing season, coming down to 2/16th in. for only limited periods, to mow daily (or twice daily) for really big events, to groom and verticut lightly and regularly when there is growth and to keep feed and water to the minimum.

This does not mean there should be no special preparation before a major tournament. Naturally, clubs and greenkeepers want their course to be enjoyed and be a fair test of the professional or amateur golfer's skill on the day. They will be as much in favour of having fast greens as all good golfers are, since the game is won on the green, but must keep things in perspective and within the restraints discussed above.
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