

Company and Cypress Point have restricted access to potable water, which they use on a rota basis between them to prevent pressure losses in the potable water system, to flush their greens once a month, lowering the salt build up. Other courses relied on the heavy rains, whereas some Superintendents found that flushing with the treated effluent actually helped remove some salt build up.

The irrigation regime of almost all the superintendents is to irrigate heavily and infrequently, although a lot of supplementary hand watering is necessary on dry spots and bunker banks (especially south facing). The greens are also syringed which is a light hand application into the air, literally misting the green, to lower the temperature of the grass by evaporation in the summer. This operation only takes about one minute for an average 500m² green, but may need to be carried out three-five times a day, even more on really hot days.

From the Los Angeles area onwards we came across warm season grasses, these were either Common bermuda (cynodon sp), Hybrid bermuda (cynodon sp), Kakuei (Pennistum

clandestinum), or a mix of all three (Sanctuary and Desert Forest were the exceptions, as they had Creeping bent fairways). Some Superintendents preferred common; some were trying to make the transition from common to hybrid, while others encouraged Kakuei. Whatever the type, they had all managed to produce good playing surfaces. In fact Bel-Air Country club had just stripped and returfed the entire 17th fairway (a 449 yard par 4) with hybrid bermuda and put it back into play all in one week!

A problem with these warm season grasses is that once they get going they go, to the point where all the edging needs trimming once a week, buggy paths, pathways, bunkers, pop-ups, even the greens edges to stop the grasses encroaching onto the green. Other methods of stopping this encroachment onto the green varied from mild herbicides to a three-foot collar of 100% rye grass around the green. Some courses with newly constructed greens had a slot incorporated into the top of the non-porous membrane that lines the green, to facilitate accurate edging so that the shape of the green remains intact.

TRILO'S GOT LEAF COLLECTING OFF TO A TEE



For years people scratched their heads looking for a speedy, efficient and economical way of collecting leaves and



grass cuttings. Then, in 1966, the engineers at Trilo came up with the perfect solution – an ingenious vacuum sweeper which they called the Trilo Grass

Collector. The idea was a huge success and the company's reputation for expertise and quality soon spread world-wide. Thirty years on, Trilo is still leading the way with a wide range of machines that will not only vacuum, but also scarify, cut and collect.

Find out how a Trilo can make your greenkeeping job easier and more efficient by calling us direct today



TRILO

The first name in Vacuum Sweepers

SEE US AT SALTEX Stand B55-57 Demo Area



FOR HIRE OR SALES CONTACT:

MJT Contracts Ltd

Wadebridge Farm, Landwade, Exning,
Newmarket, Suffolk CB8 7NE

Tel: (01638) 720123. Fax: (01638) 720128



Some of the golf clubs had a policy of overseeding the fairways on an annual basis with rye grass, to provide grass cover in the colder winter months as the warm season grasses go dormant. At the time of our visit the warm season grasses were just starting to recover from the winter, resulting in a transitional period from cool season to warm season grasses that lasts for a few weeks, giving a stressed/scruffy appearance. The courses that choose not to overseed are either the seasonal courses (i.e. closed over the winter period), or clubs that do not receive a lot of winter play. However, apart from the seasonal courses, all the courses have varying degrees of active growth with the cool season grasses through the winter.

One of the more unusual greens that we encountered was the 6th at Riviera Country Club, referred to by the greens staff as the doughnut green. This was a large green that had a sand bunker right in the middle of it! This green also suffered with shade from surrounding trees.

The Superintendent, Paul Ramina, has undertaken extensive tree work,

thinning the crowns and generally improving light levels around the green, even to the extent of using grow lamps, which Paul says has improved the condition of the sward dramatically. The lights are removed for tournament play, but are generally used through the day as much as possible. Other unusual sights were the par five 16th at Oak Tree Golf Club that had a hangman's noose hanging from a tree near to the green. This is for any golfers to feel free to top themselves if they have a disastrous score on this hole, like Jack Nicklaus who took a 12 in the 1988 PGA. Lightening shelters featured at

Sanctuary Golf Club and Cherry Hills Golf Club as they have their fair share of lightening during the summer. The trees that came into play or bordered the tees and greens also had lightening earthing straps to minimise the risk of damage to the trees and golfers.

There are so many other interesting points that I learned during the tour that I could probably write a book on them, or at least my final year thesis. The experience of the tour has given me the opportunity to learn a great deal about the specific maintenance requirements for quite different growing conditions, ranging

from coastal and high altitude courses right through to desert courses. At every course visited, we were made to feel welcome, and the Superintendents were very forthcoming with information about their courses and individual maintenance regimes. I was very impressed with their expertise and professionalism and the very high standards that they achieved.

The Grand Tour Scholarship is one of those once in a lifetime opportunities, which I would recommend anyone to apply for, and given the chance I would do it all again.

Colin Mumford



Schedule of Grand Tour

State	Course	Designer/Year Constructed
California	San Francisco Golf Club	A.W. Tillinghast, 1918
	Pasatiempo Golf Club	Alister Mackenzie, 1923
	Pebble Beach Golf Links	J. Neville/D. Grant, 1919
	The Links at Spanish Bay	Robert Trent Jones Jr, 1992
	Spyglass Hill Golf Course	Robert Trent Jones, 1966
	Cypress Point Golf Club	Alister Mackenzie, 1928
	Los Angeles Country Club	George.C. Thomas, 1922
	Bel-Air Country Club	George.C. Thomas, 1927
Riviera Country Club	George.C. Thomas, 1927	
Nevada	Shadow Creek Golf Club	Tom Fazio, 1990
Arizona	Forest Highlands Golf Club	Tom Weiskopf/Jay Morrish, 1987 + 1999
	Troon Golf & Country Club	Tom Weiskopf/Jay Morrish, 1986
	Desert Forest Golf Club	Red Lawrence, 1962
Utah	Just drove through	
Colorado	Castle Pines Golf Club	Jack Nicklaus, 1981
	Sanctuary Golf Club	Jim Engh, 1997
	Cherry Hills Golf Club	William Flynn, 1923
Kansas	Prairie Dunes Golf Club	Perry Maxwell, 1937
Oklahoma	Southern Hills Country Club	Perry Maxwell, 1936
	Oak Tree Country Club	Pete Dye
	Oak Tree Golf Club	Pete Dye, 1976
Texas	Colonial Country Club	John Bredemus, 1936

COURSE CARD



HOLE	FRONT NINE	HOLE	FRONT NINE
1	Aldeburgh GC	10	The Gleneagles Hotel (King's & Queen's)
2	Ballybunion (Old & Cashen)	11	The Honourable Company of Edinburgh Golfers
3	The Belfry (Barbazon, PGA & Derby)	12	Killarney G&F Club (Mahoney's, Killeen & New)
4	Burhill (Old & New)	13	Richmond GC
5	Carden Park GC	14	Royal St George's GC
6	Celtic Manor (Wentwood hills)	15	Royal Wimbledon GC
7	Fota Island GC	16	Sunningdale (Old & New)
8	Foxhills (Longcross & Chertsey)	17	West Lancs GC
9	Forest of Arden Hotel G&C Club	18	Woburn (Marquess)

If you want a reliable irrigation system that has proven itself follow the course leader

For more than four years the Rain Bird Maxi Windows operated computer control system has been installed in Europe.

A combination of Rain Bird Maxi Stratus, Nimbus and Cirrus control systems have been installed on over 60 Golf Courses in the UK and Ireland together with Rain Bird EAGLE™ sprinklers.

In fact more than 150 Rain Bird Maxi systems have been installed in Europe alone.

All Rain Bird systems are installed and maintained by highly experienced contractors, with technical support and backup provided direct from Rain Bird.

A future course is under development to include Queenwood GC, Wychwood Park, Rookery Park, St Andrews Bay Development, St Georges Hill, Doonbeg GC, and The Addington due for installation this year.

RAIN BIRD®

Rain Bird S.A.R.L.
900 rue Ampère
B.P. 72000
Aix-en-Provence, Cedex 3
FRANCE
Phone (33) 4 42 24 44 61
Fax (33) 4 42 24 24 72

Rain Bird U.K. Sales
Phone: 01273 891326
Fax: 01273 891327

Rain Bird U.K. Field Service
Phone: 0121 3581883
Fax: 0121 3581891



Tiger Woods safely aboard the 17th green and about to be anointed Champion

BIGGA's Greenkeeping Support team was on duty at this year's Open Championship at St Andrews. The 52-man team contributed towards the smooth running of a magnificent week and witnessed golfing history at the same time.



Tiger Tiger burning bright

On the eve of the Championship a unique event took place at St Andrews in the shape of the Champion's Challenge which involved 20 Open Champions from the past playing in a team match over the 1st, 2nd, 17th and 18th holes.

It was a wonderful occasion graced by many legends of the game, from 88 year-old Sam Snead, winner in 1946, through to Paul Lawrie, the defending Champion.

One man who didn't play in the event but who will now play every time it is repeated is Tiger Woods.

The man who is now widely regarded as the world's top sportsman never mind golfer, marched to his first Open in a style which suggested he will win many more.

The significance of this year's triumph was that he became the youngest ever winner of the Grand Slam - the Masters, US Open, Open Championship and the US PGA - and he currently holds all but the

Masters at the same time. Indeed he is only the fifth player to join that elite band.

From the moment he cruised through the back nine on the first day the result was never in doubt and his rounds of 67 66, 67 69 gave him a record 19 under-par total and a winning margin of eight shots, to go with his 15 shot margin at Pebble Beach the previous month.

Prior to the week he had set a goal of playing all four rounds in the 60s and not going into any of St Andrews' 112 formidable and potentially score wreaking bunkers. He succeeded in both counts.

In many people's eyes keeping out of the sand is the key at St Andrews and particularly this year when Eddie Adams and his team renovated them all to produce a set of beautifully re-vented bunkers which sent shivers down the spines of all the players.

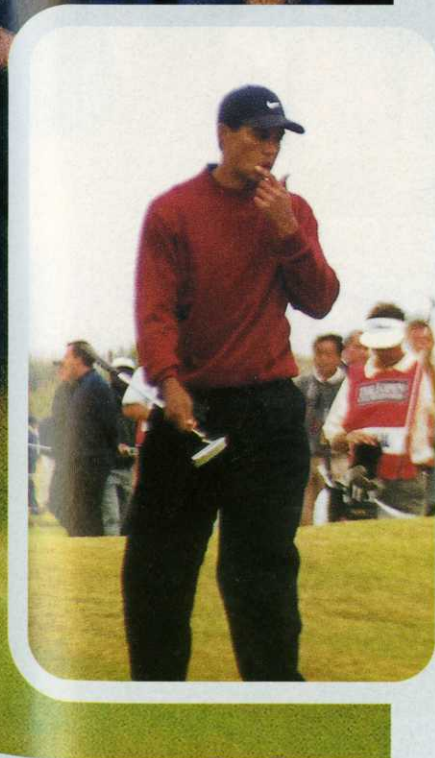
Such was the fear factor that the primary thought in the minds of players was to avoid the bunkers and that fact was borne out by the statistics produced by BIGGA's Greenkeeping Support Team. Only 448 bunkers were found during the course of the

week, by far the lowest number ever recorded and more than 1000 fewer than at Carnoustie last year which only has three more bunkers on the course.

Despite the lack of "victims" the bunkers influenced thinking to the extent that they defended the reputation of the course. It is remarkable statistic that although Carnoustie produced a winning score of 290 to St Andrews' 269, the best individual round of the week was only one different - 67 at Carnoustie to 66 at St Andrews.

Eddie Adams and his team - he could call on 70 greenkeepers from the other St Andrews Links Trust courses - were universally praised for the condition of the course which was traditional links at its best. New R&A Secretary Peter Dawson was quoted as saying, "We wanted a hard fast running golf course. Eddie Adams has supplied that and all credit to him for it."

For his part Eddie, who was able to spend quite a bit of time talking to colleagues in the BIGGA marquee during the course of the week, joked that he had the fastest fairways in the world.



Support Team Info

Dudley Hart seemed to cope with the bunkers better than most. He was in two and holed his escape from the 4th and hit the pin with his attempt from the 15th. Information supplied by BIGGA Greenkeeping Support Team member, Kneale Diamond, of Hanbury Manor Golf Club.

Sergio Garcia is never one to miss a chance for a bit of showmanship. After chipping in for an eagle on the 14th he kissed the pin at the point where the ball had bounced off and down into the hole. Information supplied by BIGGA Greenkeeping Support Team member Mark Ellis, of Stocks Hotel Golf and Country Club.

The pace of play proved quite lucrative for Lee Trevino. With time on his hands he went ball searching in gorse on the 4th hole and was successful in coming out with one. Information supplied by BIGGA Greenkeeping Support Team member Ian Semple, Old Folds Manor Golf Club.

The two men at the centre of the Ryder Cup bookgate saga, Nick Faldo and Mark James were out at different times of day but thanks to St Andrews double greens found themselves on the same putting surface when Faldo was playing the 16th and James the 2nd. No glances were exchanged. Information supplied by the BIGGA Greenkeeping Support Team member, Alan Halfyear, of Rother Valley Golf Centre, Sheffield.

Simon Dyson, "did a Hale Irwin" during his fine opening round 72 when he missed from an inch. The young Yorkshire player had a ten footer on the 4th for his third birdie in succession to take him to three under but the ball horseshoed out leaving him with a two inch tap in. However, he merely brushed the top of the ball leaving it short and he had turned a potential three into a bogey five. Information supplied by BIGGA Greenkeeping Support Team member, George Barr, of Ham Manor Golf Club.

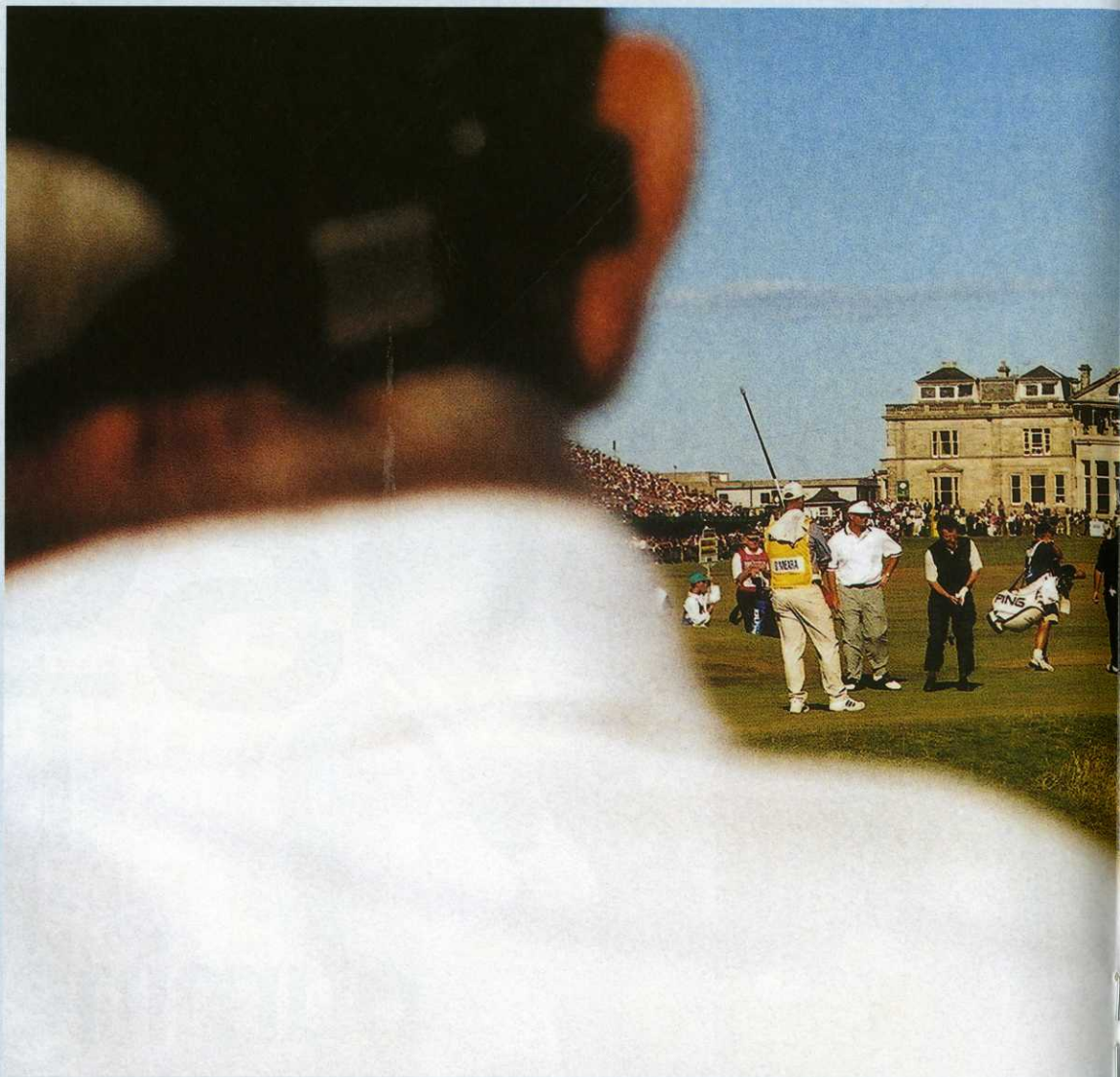
Gary Player's famous black and white trousers created some interest during the second round. During a delay in play Nick Price took a Unisys man, with a black and white shirt, over to Player and asked him to swap shirts so that Gary would be completely matching. Player originally wore the trousers 40 years ago and he revealed that his waist is now an inch narrower. Lee Trevino was a tad upset because his waist is now five inches wider! Information supplied by BIGGA Greenkeeping Support Team member Gavin Kyle, of Hendon GC.

Michael Jonzon's caddie didn't expect a stunning back nine on the second day to make the cut. He handed his caddie's badge over to a member of the gallery on the 9th when his player was six over. Information supplied by BIGGA Greenkeeping Support Team member, Robert Hogarth, of Cardrona Hotel Golf & Country Club.

Brian Davis found the easiest way to negotiate the huge 2nd green was to take a wedge. Information supplied by BIGGA Greenkeeping Support Team member, John Wells, of Brocket Hall.

The fine tradition of streaking at The Open, which reached a peak at St Andrews five years ago on the 18th green, was revived during the second round when a female exponent of the art ran across the 16th green. Sandy Lyle was teeing off at the 17th at the time and hit the best drive of his threeball. Information supplied by BIGGA Greenkeeping Support Team member, Alan Halfyear, of Rother Valley Golf Centre

Tony Johnstone took the "along the ground rather than through the air" nature of the links land conditions to an extreme when he played the 18th hole on Friday. He took putter from 100 yards out. Information supplied by BIGGA Greenkeeping Support Team member, Ian Barr, of Largs GC.



Above: The Champion's Challenge attracted huge galleries on the Wednesday



Above: Eddie Adam was remarkably relaxed all week. Pictured with Elliott Small and Scottish Chairman John Scott



Above: Open stalwarts, Cecil George and Jimmy Nielson retired from the team after this year's Open after many years service on the 1st tee. Both will still be welcome visitors to the Open every year.



Above: John Wells of Brocket Hall, prepares before going out with the last match on Sunday where he saw some action at the 17th



Above: While Tiger Woods will be remembered for making history at St Andrews, another piece of history was made by the BIGGA Greenkeeping Support Team. Stig Persson, of Sweden, predicted exactly the number of bunkers which would be found during the week the first time the feat has been achieved in the six years of the competition. He was presented with a bottle of whisky by Neil Thomas after the Championship.



Above: A member of the St Andrews' Greenstaff finishes off the 2nd and 16th greens on the Sunday morning. A check of the watch shows that everything's under control.



Above: Unfortunately, the traditional photograph of the Support Team with the new Champion was unable to be taken due to a decision to keep the area around the 18th green as clear as possible for safety reasons. The triumphant team still celebrated on the 1st fairway later however

Colin Montgomerie comfortably made the cut but his frustrations on the greens nearly got the better of him. When he made his first birdie on the 9th during the second round after a series of missed putts he turned to referee David Garland and said that if he hadn't made it David would have been refereeing a two ball. Information supplied by BIGGA Greenkeeping Support Team member, Neil Whitaker, of Arkley GC.

Jack Nicklaus hit what he thought was a fine drive at the 4th but discovered that it had only reached the first grassy mound. "I'm getting old if I can hit a great drive and not even reach the fairway," he said. Information supplied by BIGGA Greenkeeping Support Team member, Anthony Davies, of Prestbury GC.

Ian Woosnam's caddie had a joke at Lee Westwood's expense during the final round. In the wake of Westwood's statement that he was a golfer not a 400 metre runner. Wobbly got a chunky KitKat from a girl in the gallery and offered it to Westwood. Westwood went over to the girl and gave her two golf balls for it and then got his own back by throwing Woosie's putter into the gallery. Information supplied by BIGGA Greenkeeping Support Team member, Iain Barr, of Largs GC.

Jean Van De Velde always seems to find himself in unusual situations in the last round of The Open. This year his tee shot at the 2nd landed near a path on the right side of the fairway and the ball was picked up by a little girl who ran off with it. Information supplied by BIGGA Greenkeeping Support Team member, Roger Clark.

Paul Azinger was out in 30 in the final round but found trouble at the 12th when he found thick gorse. BIGGA Greenkeeping Support Team member, Alan Halfyear fought his way into the bush to mark the position of the ball and held his rake up so Azinger could retreat to the nearest point of relief. Alan emerged covered in thorns having been well reported on both television and radio for his efforts. He was rewarded with Azinger's ball.

The now traditional Scotland England football match saw Scotland build on the success of the win at Wembley in the European Championship play-off second leg with a fine 10-4 victory in the Duffus Park, Cupar. The stars of the show were George Barr, who scored a hat trick, the Scot's attacking minded right sided midfielder who showed remarkable composure to control a through pass from Marshall Sloss and then send Russell Black, the English keeper the wrong way.



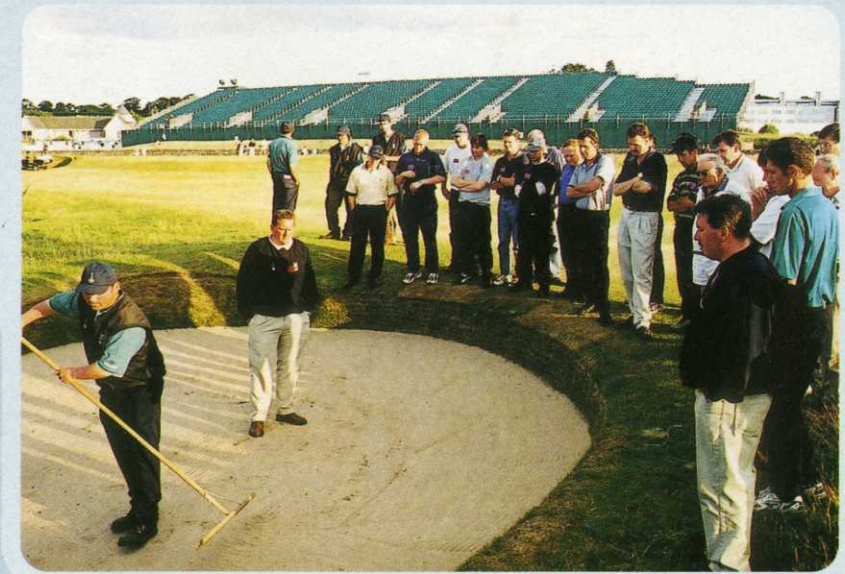
Above: The BIGGA Marquee was busy all week



Above: Bert Cross and Gordon Child manned the BIGGA cabin



Above: Burntisland Head Greenkeeper, Steven McAughey, was at the Championship as part of the Open team of part-time fire fighters



Above: With so much publicity aimed at the Old Course's Bunkers Head Greenkeeper took the opportunity to hold a briefing with the Greenkeeping Support Team on the course on Wednesday evening to explain how he wanted the bunkers raked. Standing in the appropriated named Scholar's Bunker on the 17th Eddie, and a colleague, explained and demonstrated what was expected of the team then Grant Moir, of the R&A Rules Staff, gave a short briefing on the procedures while working out on the course



	St Andrews 1995 - 112 bunkers	Lytham 1996 - 185 bunkers	Troon 1997 - 84 bunkers	Birkdale 1998 - 117 bunkers	Carnoustie 1999 - 115 bunkers	St Andrews 2000 - 112 bunkers
Rd 1	214	501	344	355	539	148
Rd 2	201	577	272	406	468	164
Rd 3	130	269	107	226	202	65
Rd 4	156	271	136	153	265	71
Total	701	1,618	859	1,140	1,474	448



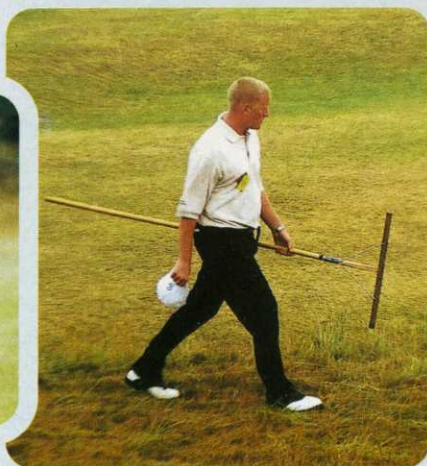
This picture: Fred Couples discusses his final drive as an attentive BIGGA Greenkeeping Support Team member Steve Oultram looks on

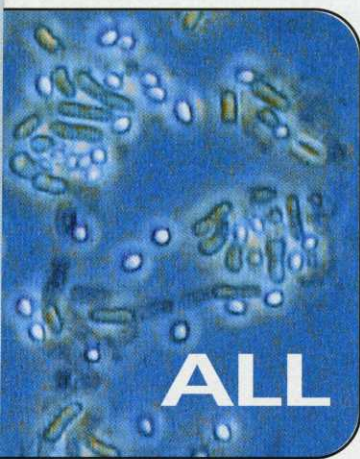


Left: Steve Pope grabs a bite to eat

Far right: Ian Leonard sports a different rake-carrying technique

Below: Paul Murphy and Nick Cain walk the fairways





**ALL IN ONE
ALL AT ONCE**



Introducing **NEW**

TurfVigor

with high impact
beneficial microbes and
key organic nutrients.



6 NEW MICROBES New TurfVigor is a complete nutrient and microbe complex featuring six new microbes specially selected and screened to encourage turf health. During times of stress, TurfVigor responsively triggers the synthesis of essential growth factors and regulatory elements to maintain a healthier stand. Its performance has been validated through research conducted at leading turf grass universities.

ONE STEP APPLICATION Because TurfVigor contains both beneficial microbes and organic nutrients, it can be mixed and applied in one easy step. In fact, TurfVigor is tank-mix compatible with a variety of fungicides and growth regulators. Its highly stable nature assures a long shelf life.

IT PAYS TO BE SELECTIVE Like all GREEN-RELEAF products, TurfVigor is environmentally friendly with microbial strains selected strictly on their ability to provide targeted turf benefits. TurfVigor is packed in 9.5 litre containers.

TO KNOW MORE CALL,

Avoncrop Amenity Products
Tel: 01934 820868 Bristol
Tel: 01344 426600 Bracknell

Richard Aitken Ltd
0141 440 0033 Glasgow
Aitkens Sportsturf Ltd
01977 681155 York



GREEN-RELEAF.
by Sybron

**We're very selective.
You should be, too.**



Green-Releaf products are marketed in the UK and Europe by GreenLink International Ltd,
1 Rysley, Holybread Lane, Little Baddow, Chelmsford, Essex CM3 4DD
Tel: +44 (0) 1245 222750 Fax: +44 (0) 1245 222755
www.green-releaf.com

ISO 9002 CERTIFICATION