



Michael Bonallack, centre, talks to Rolawn staff at the recent ETME exhibition.

BARENBRUG UK LTD

ONE look at the S.T.R.I. Turfgrass Seed booklet and another at the bewildering array of grass seed mixtures available from seed houses show how much grass breeding has advanced over the past twenty years or so. The selection and evaluation of new varieties now means that the grass seed buyer can be very specific in his choice of species and variety to suit his own particular requirement and environment.

For example, some varieties of perennial ryegrass do very well heavy duty wear such as soccer pitches, but are much poorer for finer uses. Nowadays it is not just a question of deciding which type of grass species to have - choice of variety within each species has become much more important.

Barenbrug has been a market leader in the breeding and selection of amenity grasses for many decades. The Barenbrug breeders spend many years carefully crossing and evaluating potential varieties before submitting them for official trials. Many thousands of lines have to be screened to produce one new variety. The care and attention devoted to breeding has been well rewarded in the performance of many Barenbrug

varieties in the S.T.R.I. trials. There are few other companies with the range of quality varieties leading the lists in the UK.

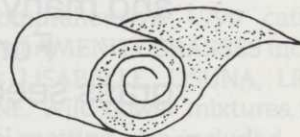
In perennial ryegrasses both Barclay and Barry are established Barenbrug varieties, with Barrage topping the new variety list for heavy duty use. With chewings fescue, Barfalla, Wintergreen and Barnica are on the list, while Baruba is an exciting new variety shortly to be released. Barcrown is a new slender creeping red fescue which promises to outperform every other variety on the list. Under brown top bents, Bardot has become a standard variety for those wishing a better quality bentgrass turf than Highland. And finally Baron which even after 20 years is still the world's best selling *Poa pratensis*.

With this stable of amenity grass varieties, it is not surprising that Barenbrug UK is set to become one of the leading suppliers of quality grass seed to the UK market.

For further information on any of the varieties or company, please contact Anthony Campson (Managing Director) or Jonathan Turner (Marketing Director) at Barenbrug UK Ltd, Rougham Industrial Estate, Bury St Edmunds, Suffolk.

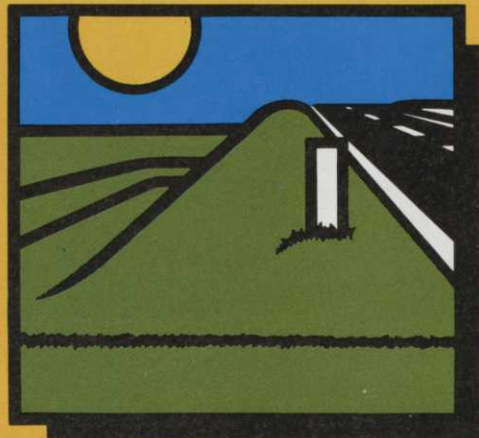
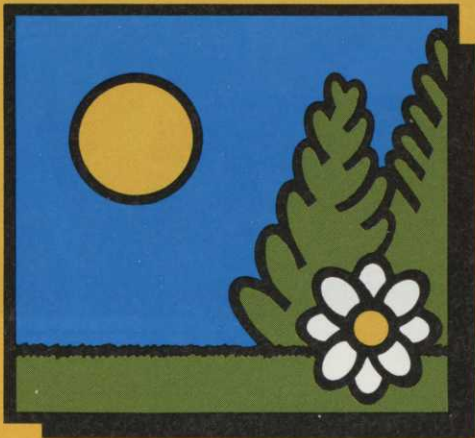
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SEEDS & TURF PRODUCERS

AVONCROP LTD

AVONCROP Ltd, the well known and respected suppliers to the Commercial Horticultural Industry, have pleasure in announcing their move into Amenity Horticulture with the formation of Avoncrop Amenity Products.

Avoncrop Amenity Products will operate out of the existing Avoncrop Ltd., premises at Sandford, near Bristol where extensive warehousing and transport facilities are available to give Customers a first class service.

Avoncrop Ltd., with their many Main Distributorships and extensive range of Commercial Horticultural Products already in stock enables the new business to make much of this available to the Amenity Customer along with leading brands of Amenity Chemicals, Fertilisers, Grass Seed Mixtures, Top Dressings, Sportsground Equipment, Line Marking Materials, etc.

Avoncrop Amenity Products "Customer Service Policy" is well backed on the Sales and Technical front with the expertise of Mr David Padfield and Mr John Palfrey who have recently joined Avoncrop and will be available to discuss any enquiries you may have.

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FAIRFIELD TURF

FAIRFIELD Turf have increased production to over 800 acres to cater for the exceptional demand for their products:

Flora Turf. This new product has been well received by the trade and especially by local authorities and architects looking to create small conservation areas, and to provide attractive swathes of colour during the growing season.

Supersport Turf. This product keeps improving, and is now, thanks to the latest ryegrass cultivars like "Numan", a much finer looking turf requiring less mowing due to the dwarf habit of this ryegrass.

For utility areas, tees which are difficult to keep grass cover on, for construction of revetments (bunker sides), ditch banks, Supersport is the ideal turf.

Superturf. Is increasingly popular as a tee's turf and for aprons and bunker slopes. The smooth stalk meadow grass contained in Superturf is extremely persistent in growth habit, and is able to shoot

JENNIFER'S POST

INTER Seeds Ltd., the amenity grass seed and wild flower seed specialists, has appointed Mrs Jennifer Waterfield as their Sports and Amenity Grassland Consultant for the South East of England.

Jennifer joins Inter Seeds Ltd. from a major fertiliser company and her role will be to advise local authorities, landscape architects, landscape contractors, turf growers, sports clubs and golf clubs on the correct choice and use of grasses, wild flowers, fertilisers and biodegradable erosion control matting.

Contact can be made through Inter Seeds Ltd., Southern Avenue, Leominster, Herefordshire HR6 0QF. Tel. (0568) 6363. Fax. (0568) 611344.



Jennifer Waterfield.

again from its rhizomes which is particularly advantageous when used on tee areas. Superturf is also well adapted to areas where drought and shade can be a problem.

Superfine Turf. Is grown from a fescue/bentgrass seed mix, providing a superb putting surface for golf and bowling greens. This grade of turf is treated against invasion by poa annua. Production is available now, and we expect demand to be very heavy for Superfine Turf this Spring.

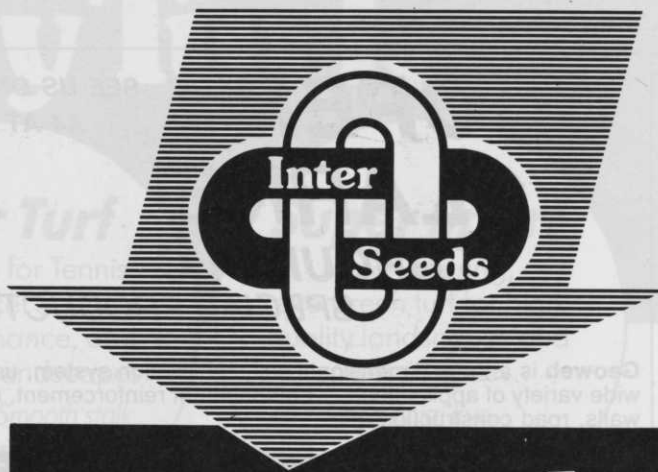
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STEWART AND CO. SEEDSMEN LTD.

STEWART & Company Seedsmen Ltd were traditional Seedsmen when they were established almost 100 years ago, as suppliers of flower and vegetable seeds to Estates and Commercial growers throughout Scotland and England.

It was the interest in sport, and golf in particular, of John Forbes, grandfather of the present Managing Director, that led to the development of the Sports Turf division of the Company.

It became apparent a number of years ago, that despite the growth in the traditional Sports Turf Market, any



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SEEDS & TURF PRODUCERS

real growth would have to come from diversification within the market place best known to the Company.

The acquisition of Sportsground Construction Ltd of Paisley, provided the ability to carry out operations as varied as machine work on Bowling and Golf Greens, construction of Five-a-Side Artificial Pitches and Full Size Grass Pitches, as well as Golf Course alterations.

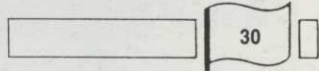
Further diversification was announced last week with the setting up of Groundcare Services, a new division within Sportsground Construction, which will supply specialised machinery to the Sports Turf market.

Another dramatic upturn in the fortunes of the Company came after its investment, four years ago, in the York-based company "Inturf", managed by Derek Edwards.

This interest in the production of quality cultivated turf, led Stewarts into setting up their own turf farm in East Linton, which has over 340 acres currently under cultivation. Stewarts turf is marketed through the Inturf Group, which has nurseries in East Lothian, York, Grantham and

Newmarket.

Although no longer traditional Seedsmen as they once were, Stewart & Company do supply their own range of Stronghold Seed and, as Scottish distributor for Mommmersteeg International, still supply the Amenity market with a variety of quality grass seeds.



BRITISH SEED HOUSES LTD.

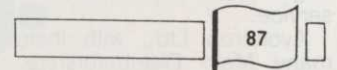
HERE is no doubt that more people than ever before are swinging a golf club and with the Royal & Ancients recent announcement that a further 700 golf courses are required in the UK over the next few years, the picture of golf in this country looks well assured. Over the last 15 years the Amenity Grass Division of B.S.H. have been carrying out a great deal of research and development work concerning new grass varieties as well as trials on different grass seed mixtures. The company are currently sponsoring a heavy research programme at both

the Plant Breeding Station at Queens University Belfast and at Abetysththo University. Independent grass trials are also being carried out at the Long Ashton Research Station near Bristol and the North Scotland Agricultural College at Aberdeen. The first results from Queens University have recently been introduced with the new low-growing slender creeping red fescue called Logro. Which grows to a height of 10/12 cms and therefore requires the minimum of cutting.

B.S.H. are the main distributors for the Penn range of creeping belts which have performed well in the South of England. Penncross was sown on the greens of the Belfry at Sutton Coldfield some 12 years ago and the greens were in perfect condition for the recent Ryder Cup Tournament. Penncross was chosen for the greens at the St of a Golf & Country Club near Plymouth and more recently this creeping fescue was used at the Collingtree Park Golf Course at Northampton and at Hanbury Manor Hotel Golf & Country Club near Hertford. A major golf project at Mount Juliet in

Southern Ireland is currently under construction where Penncross is again being sown on the greens and a fine fescue mixture on the tees and fairways

While there is a very real need for new golf courses in the UK there is no doubt that the present high interest rates are worrying developers and several major golf projects have been put back for twelve months in the hope that the countries economic situation will improve.



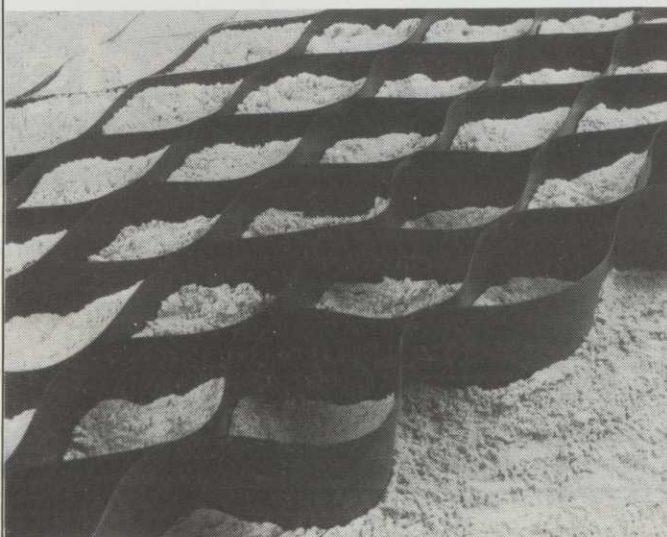
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CYLINDER MOWERS

CYLINDER Mowing started in 1832 with the Buddings Patent pedestrian machine being manufactured by Ransomes in Ipswich. Since then a number of different methods of cutting grass have been developed, all of which have their place. It has to be said though that the cylinder mower is still the most efficient way of cutting grass and of course for fine turf is the only way. In a fast changing world it is often unwise to predict what will happen in the future but I am confident that the cylinder mower, although it will be steadily improved, will continue to be the most efficient method of cutting grass for a long time to come.

Since those far off days of the Budding Patent the cylinder mower has developed out of all recognition. Many of the major developments have been pioneered by Ransomes. Take for example the introduction of the first mower with an internal combustion engine in 1902, the first mains driven mower in 1926 and, much more up to date hydraulic driven gang mowers in the 1960s and now, high output machines with electronic control systems. In 1990 the professional user of grass cutting machinery has a bewildering array of types and specifications of machine to choose from. With the increase in leisure time (for some of us), areas of amenity and fine turf will increase. That will inevitably attract more companies in wanting to get in on the scene. Those of us who have been in the industry for a number of years are wondering where it is all going to end?

Whatever area and type of grass needs to be maintained there is a cylinder mower to do the job. For cutting fine turf on greens there are pedestrian mowers or sophisticated ride on units. Both types are now very often available with a Verti-groom type reel mounted in front of the cutting cylinder. This really is the ultimate in "grooming" the turf. The Verti-groom unit is an invaluable aid to control thatch and eliminate grain by cutting internal growth resulting in a faster and more consistent putting surface.

For other areas on the golf course such as fairways, tees and surrounds, there is a wide choice of equipment. Fairways in particular in recent years have been maintained to a very much higher standard than in the past. Whether a tractor mounted or trailed machine is required or a multiple unit ride-on is preferred cut-



Ransomes Quality Audit Engineer, Mr. Barry Saunders, checking the hydraulic oil pressure while carrying out a quality audit on a triple mower off the production line.

ting units with multi blade cylinders to give a very fine finish are available. The normal number of knives in cylinders used on golf courses in the UK and Europe is 6 or 8. Our colleagues in the USA very often will specify 11 knife cylinders. The difficulties of coping with undulating fairways have been much reduced with the introduction of floating headed units which float in all directions to ensure that scalping is kept to a minimum and that grass in hollows is cut to the same

height as the rest of the fairway.

Cylinder mowing is not restricted to golf courses. Multiple unit machinery with 3 or 5 cutting units hydraulically driven are now commonplace with local authorities and contractors. The efficiency of the cylinder mower, with its relatively high cutting speed and low fuel costs has been fully appreciated by those people responsible for the upkeep of roadside verges, parks and open spaces. With reduced

costs constantly being sought to cope with the challenges of Compulsory Competitive Tendering or Privatisation as it is often mistakenly called, the high output multiple unit cylinder mower is often the first choice. The output of these machines is impressive to say the least. Take the Ransomes Motor 350D 5 unit ride-on.

Yes it is a lot of money, retailing at over £21,000. When the output of 8 acres per hour is taken into account with each one of those acres only costing

CYLINDER MOWERS

around £1.40 to cut it can be easily seen that the initial purchase price of any product should not be the first consideration. There are very few machines that could reach anything like the cost effectiveness of the Motor 350D.

The manufacturing of grass cutting machinery today is extremely advanced.

In today's very competitive works designs and manufacturing efficiency must be constantly improved to ensure that the customer gets the right product at the right price.

These investments will inevitably lead to innovations in grass cutting machinery in the future. It is very unlikely though that a better and more efficient way of cutting grass will be found than with the cylinder mower for many years to come, if at all.

RICHARD BISHOP
UK Sales Manager
Ransomes

DRAGON 5 AND 3 GANG MOWERS BY ROCRAFT

THE Rocraft Red Dragon is a British designed and manufactured power

driven gang mower incorporating a robust frame of high-stress structural steel and a straightforward assembly of simple components which reduce breakdowns and maintenance to a minimum.

The 5 gang unit with a full 11ft 6in width of cut and low power requirement make it an ideal choice for mowing large areas economically with smaller lightweight tractors.

The Red Dragon can be attached in minutes to most towing vehicles equipped with P.T.O. drive giving a wide flexibility of choice of towing unit.

Transport between sites is made easy by folding the cutting units which can be raised either hydraulically or manually.

FEATURES

- Unlike ground driven machines the P.T.O. drive will maintain a constant cylinder speed independent of forward speed enabling efficient cutting in the wet when other machines slip.
- Lighter than many hydraulic machines therefore reduces damage to wet ground.
- Automatic tension of independent 'V' belt drives to each cutting unit transmits

maximum power to the cylinders but provides flexibility to permit slip should obstacles be encountered.

- Full articulation of each cutting unit allows the Red Dragon to follow ground contours on its rear roller.
- A unique fully floating head system is available with full width front and rear rollers to give consistent height of cut over severe undulations without scalping and is particularly suitable for golf course fairways.
- Floating heads can be locked into a fixed head position with a simple lever and front rollers easily removed.
- Quick height adjusters are fitted as standard and make changes simple for those golf courses requiring one machine for both fairway and semi-rough mowing. For finer adjustment screw type adjusters are available.
- A third wheel is available as an option for any specially difficult contours to be mowed allowing complete articulation of the whole mower frame from the tractor drawbar but it is not recommended for highway duties.

STIGA-BELOS BEST ON SLOPES

MULTI-use tool carriers like the Belos are often criticised for not performing individual operations as well as a dedicated machine. Professional mower users report that the opposite applies on the 4 wheel drive Belos 1500.

Triple cylinder mowing on banks is a case in point. With its fully hydrostatic four wheel drive plus electrically selected limited slip differential, the traction and steering ability on slopes has to be tried to be fully appreciated. And because the 1500 has three double acting hydraulic power circuits in its standard specification, when fitted with the 83" wide Belos front attached triple cylinder, actual cutting performance is equal to the best dedicated out front triple cylinder rider.

Golf courses, country parks, landscaped sites, etc. often have slopes dotted with trees and shrubs which are ideal for the unique manoeuvring ability of the centre pivoting, fully articulated Belos. Add the highly sophisticated hydraulic

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CYLINDER MOWERS



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4 wheel drive, and you get the unique combination of wheel grip and tight turning without damaging the turf. With diff-lock engaged, individual wheels cannot lock and damage the turf. With a hydraulic wheel motor in each

hub, oil is diverted to the relevant wheel to give more traction.

The low centre of gravity on the Belos gives extra stability and safety, especially on grass slopes, and also on the subject of safety, a special all-weather

safety cab is available as an optional extra.

In Sweden Stiga products are famous for quality, and their long lasting reputation is one WestMac will be wanting to build on, with this unique versatile machine from

Sweden.

Model 1302 two wheel drive, centre pivot power unit retails at £10,977.90 and model 1500 four wheel drive, centre pivot power unit retails at £14,371.55 (both prices include VAT).

EDUCATION UPDATE

ELMWOOD AWARD WINNERS COME FROM NEAR AND FAR FOR THE ANNUAL AWARD CEREMONY

WITH over two hundred greenkeepers at Elmwood College it is perhaps not surprising that there should be award winners from such a wide geographical area, studying courses from apprentice to supervisory management level.

Richard Barker from Leicestershire, winner of Elmwood's distance learning supervisory course is flanked by equal second's right: Brian Story from Cumbria (who remarkably was also the award winner for the first year

greenkeeping course attended by over 55 students) and Bruce Cruickshank from Crail, Fife.

Darren Easingwood from Dunbar Golf Club with the coveted Gleneagles Challenge Trophy awarded for his outstanding project work as part of his SCOTVEC national certificate course.

Paul Seago from the Royal West Norfolk Golf Club, Brancaster, Norfolk, this year's most "far flung" award winner, with his certificate which recognises him as top student in his SCOTVEC third year course. No mean achievement considering there were over sixty trainees competing for the award.

The head greenkeeping supervisory management course offered at Elmwood is believed to be unique in the United Kingdom. James McKenzie, head greenkeeper at Renfrew Golf Club, produced written work of an outstandingly high standard to win this year's award.

JAMES M. LATHAM BIOGRAPHICAL INFORMATION

JIM Latham is the Director of the Great Lakes Region of the United States Golf Association Green Section.

He was born in Hillsboro, Texas and attended High School and Junior College there. After a tour of duty in the Marine Corps, he attended Texas A&M University where in 1952, he received a Bachelor of Science degree in Soil Science and in 1954, a Masters Degree in Agronomy (Plant Breeding).

After working as a Turf Specialist on warm-season species at the Coastal Plain Experiment Station in Tifton, Georgia, and additional graduate study at Rutgers University, he served on the USGA Green Section Staff as Northeastern Agronomist in 1956 and Southeastern Agronomist from 1957 until

1960. From that time until 1985, Latham was on the agronomic and Milorganite marketing staff of the Milwaukee Metropolitan Sewerage District.

Mr Latham is a Certified Professional Agronomist and a member of the American Society of Agronomy. He received the Distinguished Service Award from the O.J. Noer Research Foundation following his tenure as Research Director. He is also a member of the Council for Agricultural Science and Technology and holds Honorary Memberships in several Golf Course Superintendents Associations.

The Great Lakes Region is a nine-state area just south of the Canadian border, some 2,000 road miles east-west and 800 miles north-south. During the April-October period, the staff makes 220 half-day Turf Advisory Service visits to 175 subscribing clubs and courses. Until April 1, 1990, the technical staff has been one person.

ON COURSE FOR QUALITY

An Ecological Concern

By R. Taylor

Advisory Agronomist/Ecologist
The Sports Turf Research Institute,
Bingley, West Yorkshire, BD6 1AU

GOLF is the fastest growing sport of today, indeed the demand far exceeds supply and the waiting list for membership is growing longer and longer. It is the urban expansion, the increase in leisure time due to redundancy and retirement from work that now calls the tune to open up the course, to destroy the character, the natural and the national heritage at the expense of the wildlife and the landscape character.

Many clubs are looking towards course expansion by opening up the fairways and manicuring all areas in an effort to achieve a faster throughput of traffic. Unfortunately, what is gained through increased throughput can result in a significant loss in course quality.

It must be remembered that the injudicious increase of throughput gained may be counter-productive in the longer term. The widening of fairways or the increasing desire towards Americanisation will cause an increased workload on the greenstaff and will result in the degradation of the course in view of its wildlife and landscape potential. There is a limit to the carrying capacity of any course.

Over-loading the greens, tees and fairways can only increase the agronomic problems of disease, wear and compaction that were amplified by the summer drought of 1989, all of which will do little to improve the throughput, but would certainly reduce the challenge and the integrity of the course.

It is the course quality that this paper seeks to address.

Contributory Factors to Course Quality (a) Increasing Throughput of Golf

Many greenkeepers have commented to me that they spend so much time manicuring the semi-rough and rough that the priority areas struggle in the competition for maximum attention. The semi-rough and rough, particularly on many parkland courses, is mown to 1/2 inch (13 mm), the same height as on fairways. This reduces the amount of time that the greenkeeper can spend improving or maintaining the quality of the greens.

Opening up the course will certainly accommodate a greater year-round flux of traffic. However, as we found in the drought of 1989, without concentrated attention to greens and tees the course will quickly lose its turf cover and become seriously compacted. The drainage would become severely impeded to the overall detriment of the course quality.

(b) The Use of Natural Features

The above are representative of problems arising from opening up the course. Course quality should, however, also incorporate the natural heritage, and its part played in terms of Britain's landscape history. Many of the courses of today are the descendants of late 14th and 15th century landscapes that were typical of dune or upland heath environments. The early golf architects used the existing natural features to build and construct courses around nature.

They enveloped natural features into

their design and sought not to destroy them when they provided either an obstacle or hazard. Such natural features are an important part of the British golf heritage. To quote H.S. Colt (Book of Links 1912) "The only way to make attractive land provide satisfactory golf was to work in all the natural features, and not develop them more than was essential, but use them to create courses of their own character."

(c) Existing Flora and Fauna

Innumerable individual courses of today represent ancient habitats. The links and dune systems being probably the more obvious. However, many parkland courses consist of acidic heath or ancient grassland environments. A course at Doncaster, South Yorkshire, the Town Moor course, is a local authority owned course and has been historically documented in terms of its changing botanical flora. In the past, it was a principle site of the autumn gentian (*Gentianella amarella*), today it is a last stronghold of the rare dwarf and western gorse (*Ulex galii and minor*) and the rare petty whin (*Genista anglica*). These exist primarily as a consequence of its unchanged past. Many courses are set upon species-rich sites and have the potential to recreate the past habitat.

(d) Aesthetic Qualities

Course quality must also incorporate the natural beauty in terms of the visual qualities and the feeling of isolation between each fairway, and the restfulness and the tranquillity of the surroundings. With the above in mind, the description of several parkland courses can best be summed up by two adjectives, flat and artificial. Flat, together with the artificial, occasional trees that stand as isolated sentinels, certainly present a limit to our powers of exhilaration and enjoyment.

Improvement of Course Quality

(a) Areas to Consider.

There are many ways in which course quality can be improved upon. Golf need not be the selfish user of land that it is often criticised as being.

The semi-rough and rough provide an excellent opportunity for development in terms of the wildlife that they come to attract. A careful programme fitted to suit the individual requirements of the course would be rewarding in terms of its aesthetic appeal. It would present variations to the course, give definition and gradation, thereby making the course overall more attractive. Areas left on the golf course provide vital pockets or islands which are becoming increasingly valuable as natural land is being taken for domestic or industrial development. These habitats being under the preserve of the golf course are therefore becoming especially important. They can, given correct management (which is only required very infrequently), support a wealth of birds, mammals, plants and insects.

(i) The rough

The rough areas, when graded, zoned and maintained, need not severely affect the throughput of traffic, they require less maintenance than the fairways and give definition to the course. Also included within the rough are the boundary

perimeters, out of bounds hillsides or just corners of land that are often a source of neglect. The definition of the rough can be extended to include several areas on the course, all of which represent principle habitat types. These include short/long grass areas, individual trees and bushes, thickets, woodland, hedges, lakes, streams, ponds and ditches. All are found within the relatively small, confined areas of the golf course.

The roughs representing fairway divides on many parkland courses need not severely affect the throughput of traffic given correct maintenance. The British fairway should represent a hazard, from which a bad shot should be penalised with a bad lie. Zonation or grading the rough is a positive step to creating a workable hazard for the golfer and will provide a wildlife shelter area, as well as giving definition to the fairway. These areas would benefit from the introduction of wild meadow flower species which, in turn, will attract a wide range of animals for whom the area will provide food and shelter.

The creation of such an area would require infrequent attention, allowing the greenstaff time to carry out improvements and maintenance on the greens and tees. Mowing of the rough would be modified to suit the life cycle of the flowers so that they establish to become an integral component of the sward. Mowing may be adopted in July/August only. The hay is removed to prevent nutrient build up and avoid the increase in build up of debris which hinders ball hunting. The planting scheme would be such to discourage rank (tall) grass dominance which would make the finding of lost balls much easier and certainly more pleasant.

(ii) Boundary perimeters, out of bounds hillsides, neglected corners

All around the golf course perimeters the land is being destroyed or modified. The habitat loss directly affects Britain's natural history. Pressures now on the golf courses are not only to provide the golfer with a source of enjoyment and pastime, but it must also provide sanctuary to the wildlife that is increasingly under threat due to the continued urban expansion.

Conclusion

Conservation on the golf course seeks to make use of the natural resources sensibly. Habitat creation is an integral part. Careful management and sensible advice can enhance and provide variety, and thus increase the wildlife potential of the course. It is on the newer courses that creative land management and conservation is particularly great. The only way forward is the development of new courses and the retention of the existing at a standard which now exists (see D.White's editorial article in *Greenkeeping Management*, August 1989).

The Sports Turf Research Institute at Bingley has over 60 years experience in golf course maintenance. It is now expanding its services and is able to offer clubs advice on any aspect of ecological management or conservation. The Institute is able to offer clubs ecological assessments, woodland planting and management programmes, advice on the various grant aid schemes available, and an advisory service for on course ecological management.