

# Stick to Greens

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# RAIN BIRD®



## The Indian Golf Union

**T**he Indian Golf Union is the apex body of golf in the country and is responsible for the promotion and development of golf in India. Starting with only six golf clubs at the beginning, we boast of 194 golf clubs and many more under planning.

Some senior golfers in Calcutta took the initiative and with the support of golfers in Delhi, Mumbai and Madras formed the IGU on 20 Dec 1955. The object for which the Union was established were mainly to promote the game of golf in India and the maintenance in every way possible of high standards of the game.

Until then and for many years since the inception in 1829 of the second oldest golf course in the world outside of UK, Royal Calcutta Golf club was virtually managing the affairs of golf in India. RCGC instituted and started which became a prestigious Trophy "All India" in 1892 and the East India there after. Senior members of RCGC realized that for the growth of Indian Golf, more tournaments in all the main centers were needed apart from developing junior programs and sending teams abroad for the International Events. This gave rise to the idea of forming the IGU. In spite of the permanency, which the club enjoyed, it agreed to the foundation of the Union and to the handing over of whatever powers it might have yielded until then, including the privilege of conducting the Amateur Golf Championship of India which had been inaugurated by the club and also donated the trophy.

Mr AD Vickers was the first President of the IGU who worked untiringly to bring the Union into being and who was mainly responsible for the preparation of the Rules and regulations of the IGU.

Major LB Hirst, who was the Secretary of the Royal Calcutta Golf Club, became the first Secretary of IGU. In 1957 it was agreed to appoint an Honorary Secretary and Mr PR Surita became the first Honorary Secretary of IGU.

In 1957 a training scheme for Assistant Professional and Caddies form all over the country under George Willard, the then Pro at the Royal Calcutta Golf Club was instituted and the trainees were given a thorough grounding in teaching golf and in the art of club making and repairs. Another significant move was the inauguration of Inter Zonal championship for which a trophy was instituted by the legendary golfer of India Mr IS Malik.

In 1958 was another significant move when the All India Amateur championship was held at Delhi Golf club for the first time out side of Calcutta where it was held from 1892.



## GCS&MAI : OBJECTIVES

1. Assist all golf course developers/owners/entrepreneurs/organizations running golf courses to provide them useful and professional advise to overcome their problems/difficulties in improving the standard of golf courses in the country.
2. To provide technical support in upgrading or refurbishing of the golf courses and also in the development of world class golf courses for the betterment of the golf development in India.
3. To seek to improve the knowledge and techniques of Golf Course Superintendents & Managers and for this purpose to arrange meetings seminars of Turf and Turf related conferences and to promote closer relationship between state Associations.
4. Assist organizations in holding golf shows/exhibitions as and when planned.
5. To assist and support educational institutions in India to enable them to provide a higher standard of education in golf course and turf management.
6. To promote and expand public awareness of the Association and it's objectives.
7. To publish and/or promote newsletters or journal dealing with matters of interest pertaining to the Association and it's objective.
8. Assist development of suitable turf grass nurseries of homogenous species for creating healthy, true and faster putting surface. Also to assist in combating aggression of disease, pest pathogen and vagaries of weather including micro climatic changes.
9. To assist in procurement of suitable turf machinery amongst the best available in the world and within the country.
10. To maintain a nucleus of Golf Architects, Greens Superintendents, turf machinery technicians, irrigation experts, Agronomist whose knowledge and expertise can be utilized by the demanding golf courses.
11. To maintain a constant liaison with AGCSA, GCSAA and such other organization all over the world to obtain latest information and up grade our knowledge base continually.
12. To work for and achieve the improvement of the golf course in the country.





**Mr. G S Mani**  
President - GCS&MAI

**O**n behalf on the Management of Golf Course Superintendents and Managers Association of India (GCS&MAI) welcomes all its members and guests to the IGU-GCS&MAI Turfcare Seminar 2017.

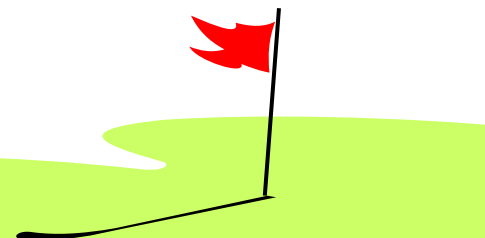
With golf emerging as the fastest growing sport in India in recent years, the efficient management and maintenance of golf courses in the country has gained great significance.

The IGU-GCS&MAI Turfcare Seminar 2017 has been organized in association with Indian Golf Union and IGIA with the objective of addressing issues and initiating an exchange of ideas on one of the most important aspects of golf course maintenance.

The seminar seeks to encourage green keepers from India and overseas to present and discuss their views, interact and share their expertise in order to contribute towards improving the playing conditions in India.

We thank our all sponsors and the Indian Golf Industry Association for all their support in staging the seminar. We look forward to a highly successful event and hope all participants are enriched by the experience.

GSMani



# GOLF COURSES FOREVER

By : Bhupendra Singh

.....working with nature

**G**olf courses have variable life spans. They may stay for centuries or may wither away in a few years of their birth. Every year all over the world we see new golf courses come up with huge investments and excitement. Some of these golf courses matures with time while other perish under pressure of time. Why some golf courses last forever while others are whittled with time? What it takes to build a lasting golf course? What is the key for long term viability of a golf course? If the answer to these questions is sought before plunging into golf course construction, large losses can be avoided by the stakeholders.

The answer to these questions is probably simple 'Golf courses that work with nature last forever' and those against it, eventually succumb to changing times. So it is about how well the local ecoscape of a golf course construction site is understood before building a golf course. The natural ecology and socio-economic parameters are the key determinants of a golf course viability. Golf courses that are conceived, designed and developed respecting the natural locality perform better, or in other words courses that are 'carved naturally from the surrounding' have greater chances of success and acceptance. Golf courses are not merely a sport facility. Golf courses are distinctly different from other sport pitches. Golf courses are the beautified extensions of local natural ecosystem of an area. This is how golf evolved and is intended to be! Great golf courses are never constructed by removing nature. Golf courses are so closely linked to the local environment and ecosystem that they cannot be conceived in



isolation. Golf course, local ecosystem, local community and the natural environment all coexist in a cyclic continuum.

Golf courses that are designed and developed to 'work with nature' have synergistic effect on the local ecology. Such golf courses turn out to be the heavens for the local flora and fauna to flourish at its best. They require minimal inputs for its maintenance as they are designed to be in sync with nature and so as they mature they becomes more self-sustaining. Such golf courses strengthen the surrounding ecology and uplifts the lifestyle of the community they serve. The returns from these golf courses significantly supersede the inputs and a golf course becomes an engine of growth and prosperity to all the stakeholders. These golf courses have great flexibility to adapt to the changing times and are decently immune to socio- economic downturns of future. Such golf courses last for generations and the communities

prosper!

But when the fascination is about recreating a fanciful replica of a 'scandivian golf course' in a sand desert, the result is an 'ever hungry golf course' which sucks in energy and resources at an ever increasing rates. Money has to be pumped in continually to keep the course running. These 'out of place' golf courses are the first to be claimed during socio-economic upheavals.

'Sustainability' is a buzz word today in every sphere of human enterprise. And it is a 'golden word' in context of golf courses. Frankly speaking it is the only key for creating 'golf courses forever'. It is rightly said that 'We do not inherit earth from our ancestors. We borrow it from our children'. And sustainable golf course development approach respect this noble notion to its best. Sustainability in simplest terms is about creating things that last long without hampering the interest of present population as well as future generations!

Some people believe that the concept of sustainability in golf is an abstract idea and cannot be pursued in practicality. This is because many still believe that golf will loose its appeal and excitement if we do not keep the golf course velvety green. Some regions of the world including the Scottish highlands where the game of golf began are naturally endowed with grass cover. In these regions grass grow naturally and it rains enough to keep it green throughout the year. However in some other parts of the planet grass change its colour but golf still remains golf even if it is 'not all green all the time'. The rising popularity of the game is a testament of its adaptability and adjustability to varied geo-climatic regions.

Most of the times change is not comfortable and we resist change.



Once the world was divided on accepting the problems of pollution and climatic change considering them to be unreal but now it is real and the entire world in unison is putting efforts for reversing its effect. With regard to sustainability approach in golf, golfing world had been quick enough in picking the pulse of change. Key golf governing organizations like R&A and USGA had been active in responding to the change and in promoting the sustainability in golf. Sooner we prepare for the change, better it is for golf!

Sustainability approach in golf is worth emulating. But who needs to change the conventional approach about golf courses? Who are the key stakeholders in the business of golf? Golf course owners & green committees, architects & designers and green keepers including the golfers can help golf courses to become more sustainable. This in turn will further make golfing more affordable and acceptable to everyone.

Building a golf course can be a profitable venture not only to the owner but its benefits can percolate down to the entire community living in an area. A new golf course brings in new hope, happiness and prosperity. It is like starting an industry that generates livelihoods for many. It can enhance the aesthetic and ecological value of a land. It is an introduction of a healthy lifestyle to the community it serves.

Every owner wish to build a golf course of his dreams. However keeping a flexible approach towards new golf course ensures better profitability and sustainability of the golf course. Sometimes the dream designs for a golf course may not be practical and viable for a golf course at a particular site. Affordability at a particular time is not a guaranty for future sustainability of a course. A successful golf course planning should be open ended and free from prejudice.

Owners who seek and rely on the genuine professional advice of those who are qualified for the job have better prospects of making a profitable golf course. All great golf courses are unique and so one should refrain from imitating other courses. To build a great golf course owners should avoid imposing unrealistic design features influenced from other part of the planet. Instead the approach should be to exercise free creativity to create the best out of the available land forms with the use of ingenuity. This will ensure exclusivity, longevity and greatness of a golf course.

The best way to predict future is to design it! It is an appropriate saying in context of the future of golf. Designers and architects carry the onus of designing the future of golf. A design have direct implications on immediate use of natural resources to build a golf course and longterm inputs in maintaining it. A good sustainable design has the potential of turning a wasteland in to a vibrant ecological reserve. Such designs can turn neglected, waste land pockets into centers of recreation and joy for the community. Such courses can be a mascot of prosperity for many.

They are easy to maintain and blend naturally with surroundings. They put to best use the local and indigenous resources and only necessary foreign elements are blended in the design. If golf is to become a game of masses sustainable architecture will pave the way for its acceptance in the world. Sustainable golf course architecture is the future of golf course designing that will determine its popularity in the times to come.

Great green keeping is about working with nature to the extent that the work itself become indistinguishable from the nature. Green keepers are frontline guardians of nature. A green keeper's decisions not only determines routine course conditions and economic viability of the course but also the fate of the golfing facility in long run.

Green keeper can play a pivotal role in making a golf course sustainable. Excess and over use of resources like fertilizers, agrochemicals and water result in sheer waste of money and damage to the environment. Good green keeping is about 'optimum inputs' into the golf course to make it sustainable. The 'optimum level of inputs' are highly debatable amongst green keepers as the boundary between 'excess and optimum' is often blurred. However great green keepers who are expected to be artist by nature and who are thorough with plant science, soil science, physics, chemistry, economics, statistics and everything else have fair chances of working within the boundary of optimums! Green keepers who remain inquisitive, are open to learn and keep track of latest innovations for efficient green keeping not only do good to themselves and their course but also to the nature and environment. Such 'precision and pro-environment' green keeping skills are valued highly in industry and will be in demand for future golf course maintenance.

Golfers play golf courses around the world in different geo-climatic settings. They have a wealth of ideas and suggestions for their home course based on their exposure of the variety of golf courses they play. These inputs from golfers can translate into improved and efficient course upkeep and better course conditioning if implemented diligently.

But sometimes it could be other way round too. Especially when the expectations of golfers are unrealistic. In situations when green committees and golfers start scaling their golf course with 'stimp' readings only, sustainability takes a back seat. Putting green speeds in a golf course are subject to grass varieties, weather and climatic conditions, maintenance regimes and multiple other factors. So to pursue superfast greens all the time throughout the year is like pursuing a myth. 'True & firm' is the basic virtue of great greens and it goes hand in hand with the concept of sustainable golf.

New golf course projects should keep 'sustainability' as the guiding spirit of their project to ensure their viability in a long run. But what is the way out for old and existing traditional golf courses? What is the first

step for such golf courses to ensure their viability and continuity? Master planning for the course is the answer!

Golf courses that are rated as best today may get replaced by other courses, which may fit better in the future! Therefore it is imperative to keep a track of a changing social scape and accordingly keep preparing, planning and adjusting with times. Golf courses cannot change overnight and so those who have no master plans for future may slip in significance in the times to come. Planning and master planning is a must for golf courses to remain competitive and successful.

Master plan is a comprehensive written long term plan which guides the evolution of a golf club in relation to the predictable future. Master plan is exclusive for every golf club because it incorporates elements based on experience that worked best for it in the past. It is guided by the inherent ethos and spirit on which the golf club achieved its acceptance and success in the community. It is developed in relation to the future but remain in tandem with the tradition of the club. Master planning gives an opportunity to shun outdated methods and embrace latest technology and efficient procedures. This helps golf clubs to keep up with time and trends in golf course industry.

A master plan can be prepared for 5 years, 10 years or more depending on how far we can see the future. Key inputs for developing the master plan for a golf club can come from multiple sources. Golfers, members, past green committee members, facility managers, green keepers and other golf experts who have known the golf club for long can be vital in master planning. It's time to master plan the future of golf and there can be no better foundation for it than sustainability!



*The author is working as Deputy Manager - Course with reputed Delhi Golf Club, New Delhi and can be contacted on [admin@gcsmi.com](mailto:admin@gcsmi.com)*





# WATER MANAGEMENT AND GOLF COURSE DESIGN



BY : Mohan Subramanian

**W**hen you think of Golf Course Design, water management is may not what immediately jumps to mind, but course design has a very significant impact on long term sustainability and water management on the Ggolf course.

The main function of the irrigation system is to replace the amount of water lost due to evaporation and transpiration. This is best achieved by providing uniform water distribution through proper sprinkler selection, placement and operation. Uniform distribution will provide a consistent turf for playing which that looks great and is a pleasure to play. Inefficient irrigation, on the other hand, will cause areas of soft and hard turf which irritates players, and takes away the fun from the game, and unhappy golfers means more complaints. In the absence of an efficient irrigation system, it has been observed that fairways and greens are typically overwatered by 30 to 50 percent. Intelligent use of water is therefore a critical factor for a good, well-maintained golf course.

*Golf Course Design-* Course Design is a key component of effective water management and it is very critical to understand the natural water flow patterns throughout the site. If the design aligns the

holes to take advantage of natural flows and recycle excess water, it is a good start to water management. Most architects locate bodies of water bodies at low points on the site. This helps excess water flow naturally to these bodies of water body but if there are obstructions to the free flow, it will lead to water logging issues. The way a course is designed, therefore, has a major impact on water requirements. The lesser Less the irrigated turf areas, the lesser lowers the water requirements and. Ggrass selection also plays a very important role. Native drought resistance grasses help save water and also provide a good contrast between playing and non-playing areas.

Recycled water is increasingly becoming the main source of irrigation and proper storage of the recycled water is a critical factor. Some architects have opted for underground storage tanks for irrigation water and this which has been very successful. It not only keeps the recycled water from deteriorating but also drastically cuts evaporation losses drastically. The water storage is sometimes-can then be used as a play area or teeing surface.

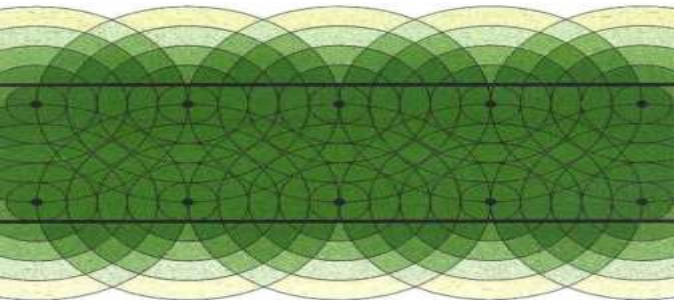
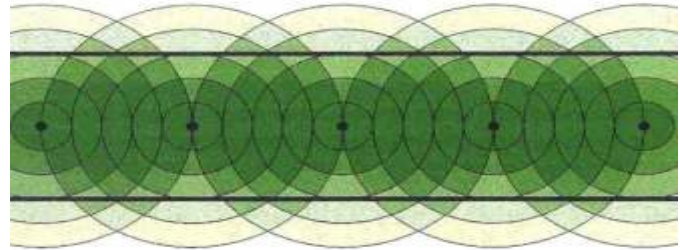
There is also a popular misconception that using more sprinklers might indicates excess watering but the reverse is often the truth. More sprinklers with shorter throws are better in managing irrigated and non-irrigated turf and lead to substantial water savings.

*Water Conservation-* If the course design provides for



Large waste bunkers reduce water requirement

better rainwater collection of rainwater, that this is a great start towards improved water conservation. Effective collection and utilisation of rainwater is the first critical step in water conservation and course design plays a huge role in achieving this. Technology also plays a vital role in conserving water, including the use of individual sprinkler control, real time monitoring, sensors for rain and moisture sensing and using the collected data in real time, smart pump monitoring and flow management are some of the important technologies that help conserve water. The Architects have to play the lead role take the lead in bringing up the need for these technologies to be implemented on the course. Efficient water translates directly in to to firm and good optimal playing surfaces. This which in turn has a direct effect on player satisfaction.



Better uniformity with multiple rows. More sprinklers means less water

*Maintenance-* The selection of appropriate turf plays a vital role in the overall managing the recurring costs incurred towards maintenance of the golf course maintenance. The type of turf will dictate the water usage, the frequency of mowing and hence the resources required to maintain it. Integrated control technologies that can pinpoint the source of the problem in the irrigation system and also as well as predict future problems go a long way in reducing maintenance costs. Though budgetary constraints and the type of feel preferred influence the maintenance costs, the type of grass dictates the amount of water required for the irrigation cycle.

*Advocacy-* One of the biggest roles that a Golf Course Architect can play in water management is the stewardship and advocacy to steer the thought process of the management. Responsible use of land and water are very important to water management, and incorporating wetlands in to the course design is a very good way of providing a

natural zone to filter chemicals and runoff from leaching in to the soil. Many Golf courses around the world are increasingly working with organisations like the Golf Environment Organisation to make their courses more sustainable and these initiatives are often promoted by the architects. Water conservation is increasingly becoming a key aspect of sustainability and efficient water management plays a vital role in meeting sustainability goals.

Water scarcity, regulations and increasing water cost are forcing the golf courses to consider how the course design impacts water management needs for the course. This also has a direct impact on profitability for the course. As courses incorporate efficient irrigation systems, they begin to be viewed as part of the solution and not the problem. Many courses that recycle city sewage and use them it for irrigation are playing a vital role an important part in changing the public perception. It is very clear that Golf courses can use course design for effective water management while also provideing an enjoyable playing experience.

# CERTIFICATE COURSE IN TURF GRASS MANAGEMENT

By : Dr. Naresh Pancholi

**T**urf grass industry is a multibillion-dollar industry in the developed nations. Even in India, due to huge popularity of sports among the common public, the growth of sport fields (cricket, football and golf courses) is in a fast pace. Due to continuous and steady enhancement in the standard of living, real estates (aesthetic landscape) and industrial parks (SEZs) have grown up tremendously. Turf grasses are very important ingredients in any of the above landscape. Thus, a fast phenomenal growth requires technically sound personnel with excellent turf grass management expertise. The availability of turf grass management professionals so far is very limited; hence, the management of respective organization has been forced to hire overseas staff (this is very true for golf courses). In the USA alone, more than 35 universities are running turf grass management courses. Unfortunately, in India not a single institution offers course in turf grass management.

Under such scenario, there is a constant demand for well-trained turf grass managers, golf superintendents, golf course manager, ground's man, etc. Turf grass industry is also a money spinning business for technically sound youth. Hence, the proposed course will open up a world of opportunities for the graduate students and professionals with this certificate course. The curriculum is designed for students who are seeking a strong background in applied turf grass science and entry into turf and sod industry upon graduation. Indian sports industry is expanding leaps and bounce and it has come up with some of the finest golf courses, cricket grounds and large industrial parks. This certificate course is aimed to insure a bright profession for the students of

country. The enrolled students will be benefitted in terms of both career progression and enhancement of field skills.

**Curriculum:** Broadly, it covers topics such as Introduction to turf grass, Soil management for turf grass, Turf establishment, Water management, Nutrient management, Turf grass maintenance, Pest & disease management, Project economics as well as two months of hands on training in collaboration with popular golf courses and sports field of India.

**Training style:** The training style is participative and action oriented at golf courses and grounds. The emphasis is on learning through experiences along with theories. Group assignments, discussions, hands on training, dissertation, etc. are through interactive modes.

**Course faculty:** Faculty for the course includes experts of applied agricultural sciences from Navsari Agricultural University as well as invited lecturers / experts having sound knowledge and current practices specific to the turf grass from Golf Course Superintendents & Managers Association of India (GCS&MAI) and similar organizations.

The 1<sup>st</sup> batch of this course ran from November 2015 to May 2016, and 7 students participated in the maiden session.

The 2<sup>nd</sup> batch is still in progress. This time 6 students have enrolled. Theory classes are over and now students will go for field training.

At this occasion, I would like to thank everyone who helped, spared and contributed their resources to make this programme a great success. I would like to extend my special thanks to the office bearers of GCS&MAI, golf course owners and other people who helped students to secure field trainings.





**Redexim** develops and manufactures machines for the maintenance of the turf on Golf-Courses, Sports-fields, Public Areas and Horse Race Tracks. The company started in 1978 with the invention of the Verti-Drain Seep Tine Aeration Machine, which was revolutionary at that time. Over-time **Redexim** developed into a company manufacturing a wide range of specialized machines for the maintenance of the turf, such as Overseeders, Top-dressers, Sweepers, Scarifiers, Brushes and of course Aerators.

More recently, **Redexim** has been producing machines for sports fields made of Artificial Turf too. Redexim has a distribution network over more than 100 countries, and has its own offices in Australia, China, the UK and the USA, aside from its headquarters in the Netherlands. In India **Redexim** is represented by “Gallant Sports & Infra Pvt.Ltd.” a well established name in the Sports Infra business and would not only do Sales but also complete maintenance and after sales. We would have a well stocked Spare-Parts warehouse in India which would service the clients. Our Products in the past has been used by Kerala Cricket Association, BCCI.



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## **RAIN BIRD JOINS FORCES WITH GOLF ENVIRONMENT ORGANIZATION (GEO)**

**TUCSON, AZ** (March 27, 2017) – Rain Bird has partnered with international non-profit, the Golf Environment Organization (GEO). This relationship will build upon the two organizations' shared interest in creating a stronger, more sustainable future for the entire golf industry.

"This new, globally relevant relationship with GEO aligns with Rain Bird's goal of helping golf courses maintain the best possible playing surfaces with less water," said Mohan Subramanian, international sales manager for Rain Bird's Golf Division. "We're proud to be supporting GEO's important and innovative work. We look forward to helping GEO raise awareness of the need for sustainable golf courses while simultaneously demonstrating the value of our water-efficient irrigation products."

"We are delighted to welcome Rain Bird aboard the sustainability platform that has been created with so many established partners," said Jonathan Smith, CEO of GEO. "Rain Bird's knowledge, insight and commitment to The Intelligent Use of Water will guide the ongoing development of industry solutions. Their support will also help us advance our advocacy and communications activities within the sector and promote golf's positive aspects to a wider audience. We want to assist individual courses and the entire golf industry as we all adapt to an uncertain future with climate change and limited resources."

GEO, an international non-profit, supports the global golf industry in its drive toward sustainability. By facilitating cross-industry partnerships, GEO has created support programs that spotlight the social and environmental value of golf courses, developments and tournaments. GEO also manages an internationally accredited, independently assessed certification system which provides credible recognition for facilities and developments committed to both people and the planet.

For more information about Rain Bird Golf, visit [www.rainbird.com/golf](http://www.rainbird.com/golf). Learn more about GEO and sustainability's role in the golf industry at [www.golfenvironment.org](http://www.golfenvironment.org).

### **ABOUT RAIN BIRD CORPORATION – GOLF DIVISION:**

Rain Bird Corporation – Golf Division provides complete irrigation solutions to golf courses across the globe. The company has one of the strongest portfolios of trusted, quality, leading-edge products including pump stations, rotors, field controllers, map-based and mobile central control systems, decoders, swing joints, filtration systems, valves and irrigation accessories. Central controls and pump stations are serviced and supported by a comprehensive Global Service Plan (GSP). Rain Bird products and services are sold worldwide through an extensive distribution network. For more information, please contact 1-800-RAINBIRD or visit [www.rainbird.com/golf](http://www.rainbird.com/golf).



## Company Profile:

Company serving Golf Course, Landscape, Sports Fields, Beachside, Indoor & Outdoor Horticulture, Green House, Open Field, Floriculture, Nurseries, Tissue Culture, Drip Irrigation or Hydroponics. We provide Single Stop Solution with wide range of products.

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CEO:

VINOD GOYAL

B.Sc. (Chem.), LL.B. (Delhi), P.G.D. Im. & Ex. (Delhi)

Mobile: 91 98188 53920, 91 98370 03505

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**Agricare Corporation**

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# IGU-GCS&MAI TURFCARE SEMINAR 2017

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# PROGRAMME FOR THE SEMINAR

## Thursday, 20th April 2017



Speaker : Mr. Tim Denham  
Subject : Role of a modern Greenkeeper  
Time : 1330 hrs to 1430 hrs



Speaker : Mr. Carmen Magro  
Subject : Soil Moisture and its importance  
In Green Keeping.  
Time : 1430 hrs to 1515 hrs



Speaker : Mr. Craig Holden  
Subject : Use of Organic & Slow Release  
Fertilizers at Low Water Requirement.  
Time : 1515 hrs to 1545 hrs



Speaker: Mr. Rakesh Sharma  
Subject: To be decided  
Time: 1545 hrs to 1600 hrs



Speaker : Mr. Heasel Rozema  
Subject : Aeration for the Green Keepers  
Time : 1600 hrs 1630 hrs.

## Thursday, 20th April 2017

Subject : Weed and Pest Control.  
Time : 1630 hrs to 1730 hrs  
Moderator Ms. Nuzhat Gul  
Panelists : Col S K Bhattacharya, Mr. Pradeep  
Joshi, Mr. Vikas Kumar, Mr. Inderjeet Yadav ,  
Mr. Yadvendra Shah, Mr. Uma Shankar Shukla

## Friday, 21st April 2017



Speaker : Mr. Tim Denham  
Subject : Career Path and Prospects  
Time : 0930 hrs to 1030 hrs



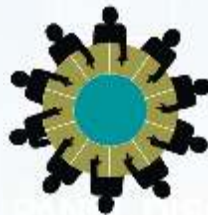
Speaker : Mr. Cameron Russel  
Subject : My Turf – An Overview of Fleet  
Management System  
Time : 1030 hrs to 1100 hrs



Speaker : Mr. Varun Oberoi  
Subject : Water Conservation by Maintenance  
of Irrigation System in Golf Course.  
Time : 1100 hrs to 1130 hrs.



Speaker : Mr. Vijit Nandrajog  
Subject : To Be Announced.  
Time : 1130 hrs to 1145 hrs.



## PANEL DISCUSSION

## Friday, 21st April 2017

Subject : Cultural Practices on the Golf Courses.  
Time : 1200 hrs to 1300 hrs  
Moderator : Mr. Vijit Nandrajog  
Panelists : Col K K K Singh, Mr. Bhupinder Singh, Mr.  
Babu Lall, Mr. Gaurav Pundhir, Wg Cdr S S Dhankhar



# FAIRY RING

By : Vinod Goyal



## Symptoms

**F**airy Rings are caused by a diverse family of soil-inhabiting fungi called basidiomycetes. They typically appear as dark green circles in the lawn ranging in size from a few inches to 200 feet or more in diameter. Lush rings of turf are formed by the release of nutrients, in particular nitrogen, from the activity of the fungus living on organic matter in the soil. A circle of mushrooms usually develops around the edge of the infected area.

Fairy Rings grow outward at the rate of 6 to 24 inches annually depending on grass, soil and weather conditions. They are most common on sandy soils that are low in water and fertility. Thick thatch layers also contribute to this problem.

Besides being unsightly, fairy rings can cause serious damage to lawns. Often the disease will produce a thick fungal mat that prevents water from reaching the grass roots below. Once the soil becomes dry it is very difficult to wet and the grass roots eventually die. The fungus may also deplete soil nutrients and, in some cases, will release a toxic by-product that can directly kill the turf within a ring.

The name "fairy ring" comes from an old folk-tale. People once believed that the mushrooms appeared where fairies had danced the night before.

## Control Measures

Practices that promote healthy lawns help to reduce the occurrence of this turf grass disease.

1. Remove excess thatch (Dethacher) and aerate compacted soils.
2. Keep lawns well watered.
3. Encourage beneficial soil microbes by top dressing with a humus builder such as Humicare or finished compost (Sardar Organic Manure and Neem Cake).
4. Your mantra should be; Fertilize, water, aerate and mow.

## Treatment

1. Mushrooms can be removed from the fairy ring with a hand rake. Destroy the removed mushrooms.
2. Apply Vitanica P3 foliar fertilizer (100 ml) mixed with Silicon based good quality wetting agent (12 ml) dissolved in 50 Litre of water to improve the colouring of a dark green fairy ring. This, however, will not eradicate the underlying fungal disease.
3. Aerate affected turf grass soil with a core aerator or garden fork, poking holes into the soil to a depth of 5 inches and to a width of 18 inches on the sides of the fairy ring. Water the treated area until it is saturated for up to six weeks.
4. Apply Amistar (azoxystrobin 25SC) fungicide (50ml dissolved in 50 Litre of water) using Boom Sprayer or Knapsack for chemical control and to keep mushrooms from developing. Use the fungicide in combination with previously mentioned cultural improvements.



*The author is a graduate in Chemistry & Botany and Post Graduate in Law & Commerce and over 30 years experience in manufacturing of Agro inputs and can be contacted on [admin@gcsmai.com](mailto:admin@gcsmai.com)*

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