Course Consulting Service

ON-SITE VISIT REPORT

BON AIR COUNTRY CLUB
Glen Rock, Pennsylvania

Visit Date: June 7, 2017

Present: Brendan Howard, Golf Course Superintendent
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It was my pleasure conducting a half-day Course Consultation Service visit to Bon Air Country Club. Overall, the golf course was in excellent condition. A majority of our time was spent discussing strategies to reallocate resources away from areas of the course that have little impact on the playing conditions to areas that matter most, such as putting greens, fairways, bunkers, and so on. Without a substantial increase to the operating budget, reallocation of resources is needed to improve playing conditions. This may mean minor sacrifices in aesthetics, but will result in better playing conditions and healthier turfgrass in the important areas of the course.

Additionally, we discussed last year's turf loss in the fairways. According to Mr. Howard, a fungal disease that is very common on ryegrass, grey leaf spot (GLS), caused the decline. Several courses I visit with ryegrass fairways experienced this devastating disease that can kill ryegrass quickly. In the mid-Atlantic region, GLS is a major reason golf courses converted away from ryegrass to bentgrass.

The following topics were discussed during my visit:

- General putting green evaluation and cultivation assessment
- Resource management assessment
- Grey leaf spot description and recovery
- Tree management program
- Forward tee construction

With these thoughts in mind, I offer the following report as a summary of the major topics of discussion during our visit.

PUTTING GREENS

Overall, the putting greens were in good condition despite the prolonged wet soil conditions prior to my visit. Strategies to improve putting green turf health and playing conditions were discussed.

Cultivation

Excess organic matter was present in many of the soil profiles examined, which created anaerobic soil conditions. Excess organic matter is detrimental to turf health and playability because it holds excess moisture. This excess moisture in the upper root zone can increase disease occurrence and severity while also softening the putting green surface, which results in more ball marks.

The organic matter is holding water in the upper portion of the root zone and should be reduced with core aeration.

Organic matter levels are maintained within a preferred range (typically within two to four percent by weight) with some type of cultivation and sand-topdressing. Currently, solid-tine aeration treatments and sand-topdressing applications are made to dilute organic matter accumulation. This process is incorporating sand into the soil profile, but is not removing accumulating organic matter. Core aeration is needed to do this. I recommend core aerating the putting greens with 5/8 inch diameter tines in the spring and fall to remove the organic matter and then fill the holes with sand.

Core aeration is a more labor-intensive process compared to solid-tine aeration because it requires removal of the cores after aeration. Therefore, consider contracting the core aeration service until a more efficient aeration machine can be purchased. The most popular aeration machine is the Toro ProCore 648. This machine is fast, reliable, and removes cores from the soil profile cleanly. Additionally, core-collecting attachments can be purchased to make collecting aeration cores more efficient. I recommend purchasing an updated aeration machine such as the ProCore 648 so that the putting greens can be core aerated more regularly.

The following articles offer more information on organic matter and putting green aeration:

- Putting Green Aeration
- Make More Birdies By Controlling Organic Matter
- Why Do Golf Courses Aerate So Much?
- Why Aerate Putting Greens?
- Does Golf Course Aeration Affect Putting?

Number 16

The growing environment for Number 16 green is less than ideal. The dense, close tree line blocks air movement to this green which has likely led to the turf decline experienced last year. The trees to the right and behind this green should be removed to improve air movement. If this is not possible, an oscillating fan should be installed to provide adequate air movement. The greatest cost of installing oscillating fans is typically the cost of the power wire. The distance between the closest power source and Number 16 green is quite far. Therefore, a portable fan powered by a generator may be the most affordable option. A portable fan can also be used at other putting greens when needed. The article, Using Turf Fans in the Northeast, offers more information on the importance of adequate air movement and oscillating fans around putting greens.

The dense tree line behind and to the right of Number 16 green should be removed to improve air movement to the green.

RESOURCE MANANGEMENT

Much of our time was spent discussing strategies that will help to reallocate resources to areas of the golf course that matter most. Doing this will help to improve turf health and playing conditions in these areas without increasing operating costs significantly. Some strategies to reallocate resources may not appear to result in significant cost reductions, but reducing inputs to these areas over the course of an entire season will result in reductions. Read the case study, The Benefits of Enhances Playability, for more information on focusing on areas of the course that matter most.

Measuring Inputs

It is important to know the cost of various tasks in areas of the golf course to maximize the benefits of resource management. A great tool to measure resource consumption is the ASB TaskTracker, which tracks how many labor hours and costs are spent on tasks in specific areas of the golf course. The program automatically tracks all labor data, which can then be examined to locate areas of resource reduction and/or increases. The courses I visit that utilize this or a similar technology have found it extremely helpful in their resource management analysis.

Reallocation Strategies

Following is an outline of several proven methods of cost savings in order to reallocate resources to areas of the course that matter most:

- Implementation of low-maintenance rough in out-of-play areas
  - Low-maintenance rough helps reduce labor, equipment and fuel costs by reducing the number of times rough is mown each season. Typically, the primary rough at Bon Air is mowed two times per week, which requires significant labor inputs. I suggest mowing out-of-play areas (such as to the left of Number Eight green and to the left of Number One fairway approximately 150 yards from the green) every six to eight weeks, or as needed, to control unsightly weeds.
- Eliminate intermediate rough cut around fairways
  - The intermediate rough cut around the fairway requires approximately 15 labor hours and a dedicated piece of equipment to mow each week. This small area of the course does not offer much impact on playability for the amount of resources required to maintain it. I recommend eliminating the intermediate cut and mowing it the same height as the fairway.
- Eliminate golf course accessories
  - Each season, golf course accessories such as ball washers and benches are either refurbished or replaced. Refurbishment and replacement is costly and time consuming. I suggest eliminating unnecessary accessories to reduce costs so that other projects such as drainage installations, tree work, and so on can be performed.
- Tree removal to reduce costs
  - Surface roots of trees can be damaging to mowing equipment and cart paths. Furthermore, tree roots compete with turfgrass for water and nutrients resulting in thin turf, which requires additional inputs with marginal results. Trees near cart paths should be removed so the investment of the cart path is protected.
  - Trees are expensive to maintain. Annual leaf cleanup, maneuvering around them and tree root competition are some of the most expensive effects of trees. Bon Air has too many trees that are reducing the operational efficiency when mowing the primary rough every week. There is a Hidden Cost of Trees many golfers do not consider.

Maximizing Operational Efficiency

The Bon Air maintenance department should be allocated more time to perform important tasks as efficiently as possible. They are several crew members short of what is needed. Hiring and retaining qualified employees is a challenge for many superintendents so maximizing operational efficiency is critical.

Tee Times

The early start times and no set tee times interfere with operational efficiency. At golf facilities that have as many rounds as Bon Air, set tee times are very important. This allows the maintenance team to prepare the golf course for play at peak efficiency, or without interference from golfers. At the very least, golfers should be given a firm and consistent tee time so that Mr. Howard can plan maintenance accordingly.

Maintenance Gaps

A maintenance gap is a temporary suspension of tee times that creates a predictable gap in play during which necessary maintenance tasks can be performed. For example, a course can suspend tee times, typically from 9 a.m. to 10:30 a.m., on their slowest day of the week to create a gap in play. The maintenance team can work at peak efficiency within the gap in tee times without interfering with play. A maintenance gap can allow tasks such as rough mowing, bunker maintenance, venting greens and topdressing to be performed with minimal impact on golfers. Additionally, when the entire maintenance team is focusing on one or two holes, managers can easily monitor productivity and prevent costly mistakes.

It is important to note that there is no one-size-fits-all system for implementing a maintenance gap. Use the guidelines below to formulate a maintenance gap that best suits your facility:

- As with every new initiative, communicating with decision-makers and golfers is essential for gaining acceptance.
- Make sure your maintenance gap provides enough time to complete the desired tasks.
- If golfers tee off on both the front and back nine, alternate the gap between nines on a weekly basis so the entire course receives equal attention.
- Make sure the maintenance gap is a firm policy; absolutely no golfers should be allowed to tee off during the gap. This is crucial for the maintenance gap to succeed because employees are often trained to stop working and move to a safe area when golfers are playing. If golfers interrupt the maintenance gap, operational efficiency will be significantly reduced.
- Do not create rain dates for scheduled maintenance gaps. Rescheduling maintenance days will create confusion among golfers.

FAIRWAYS

Last year, the grey leaf spot (GLS) led to significant decline on the ryegrass fairways. GLS is a devastating fungal disease that can kill ryegrass quickly despite preventative fungicide applications. Turf recovery of the damaged areas was coming along nicely at the time of my visit. The slowest fairway to recovery was Number 16 due to its poor soil.

GLS has not been a recurring issue at Bon Air. Last year's weather led to a GLS outbreak at Bon Air and many other biotic and abiotic issues throughout the region. There was much to be learned from last year's weather but few dramatic changes are needed because of the weather. With that said, if GLS continues to be an issue, changes may be warranted. Until this time, consider last year's turf decline a result of the unfavorable weather that hopefully is not the new norm. I would not change the agronomic management programs of the fairways in their current form.

TREE MANAGEMENT PLAN

Bon Air is in need of a comprehensive tree management plan. The property is overgrown with trees and trees located in areas that are affecting playability and turf health. In-play areas will need selective tree removal in the winter to minimize turf damage from heavy equipment use. Selective tree removal will help to improve playing conditions, turf health and operational efficiency.

The large oak tree to the front right of Number Eight Green should be a top priority for removal because it blocks the left third of the green.

A successful tree management program requires proper planning to identify trees that are a top priority for removal. Trees that affect turf health in high play areas and trees that are in decline would be high priority trees. High priority trees at Bon Air would include trees blocking sunlight and air movement to putting greens and those that are too close to fine turf areas resulting in turf decline (such as around Number 12 fairway). There are numerous evergreens on the golf course, such as spruces and white pines, which have poor structural integrity and extensive surface roots.

Turf decline in this area has resulted from tree root competition and cart traffic.

The trees between the left side of Number 12 fairway and adjacent cart path are too close to the fairway and should be removed.

When developing a tree management program the following criteria should be considered:

- The impact on the agronomics of growing turfgrass
- The impact on playability
- The impact on traffic flow
- The desirability of the tree based on its species
- The general health of the tree including its form and structure
- Life expectancy
- The impact on aesthetics and surrounding trees

Once the tree management plan is developed, it is important to make it an evolving plan. Priority levels will inevitably change and the plan should reflect such changes. The plan is also not intended to be completed in a year or two. Tree management plans should address the most problematic areas quickly but over the span of several years when selectively removing trees from a large grouping. In these types of situations, additional trees can always be removed the next year.

The following articles outline the importance and key considerations when developing and executing a tree management program.

- Managing Trees on a Golf Course
- Fore the Golfer: Managing Trees on a Golf Course
- Tree Removal Improves Turfgrass Health, Performance, and Playing Quality
- The Hidden Cost of Trees
- Tree Management to Protect Renovated Cart Paths

TEES

The construction of new forward tees is a great improvement to the golf course. These tees help higher handicapped and novice golfers enjoy their round. I recommend constructing additional tees to accommodate novice golfers at an already difficult golf course.

CONCLUSION

With some minor changes this season, Bon Air can improve the playing conditions with few additional inputs. Reallocating resources is something that can be performed immediately and provide significant improvements. Be sure to communicate the intent of the changes to golfers so that they understand that the goal is to improve overall course conditioning. I look forward to my follow up visit later this season.

This concludes my summary of the major points of discussion during my visit and tour of your golf course. If any questions arise concerning this visit, my report or any other area, please feel free to call our office. We are here to help.

The USGA appreciates your support of the Course Consulting Service. Please visit the Course Care section of usga.org to access regional updates that detail agronomist observations across the region. Also, please visit the Water Resource Center to learn about golf's use of water and how your facility can help conserve and protect our most important natural resource.

Sincerely,

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SAB: mf

cc: Brendan Howard, Golf Course Superintendent