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USGA GREEN SECTION TURF ADVISORY SERVICE REPORT

SUSSEX PINES GOLF CLUB

Georgetown, Delaware

May 28, 2009

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INTRODUCTION

The following report is offered to summarize the major points of discussion during our half-day visit to Sussex Pines Golf Club, on Thursday, May 28, 2009. This report will include observations, suggestions and recommendations made during our tour of your facility.

A large contingent of interested members attended our visit. We did our best to compile a complete list of those present. Please excuse us if there are people that we missed. We appreciate the interest of everyone in the group!



On the right side of the picture, this grass never really became established while some of the damage down the center of the green appeared to be from *Pythium* damping-off disease. This picture taken on May 28th should be used as a baseline to measure progress on this green.

The primary focus of our visit was grow-in of your rebuilt putting greens. Some turfgrass loss occurred due to *Pythium* damping-off disease. Additionally, heights of cut on the greens need to be reduced to encourage better density of the grass and to slowly

condition the grass for regular play. Overall turf coverage provides a good base to provide recovery in damaged areas. While there will be some challenging areas that are likely leftover until the fall, the majority of the greens will be playable, hopefully, before that time. However, at this point in time it is difficult to predict when the greens will be ready to receive traffic. When we stop by in mid-June, we hope to have a better idea of the maturation of the greens.

Many different topics were discussed during our tour of the golf course. Our goal is to offer recommendations to expedite the grow-in of the greens from this point on. With those thoughts in mind, we offer the following suggestions and recommendations for your consideration.

GREENS



This picture illustrates how much grass is on the surface of the green and how badly height of cut needs to be reduced. It also illustrates how well rooted your new grass is which is a true positive that indicates the grass is healthy and simply needs to be groomed into playable condition in coming weeks.

1. **MOWING HEIGHT.** At the time of our visit, we recommended that height of cut on the greens be reduced fairly rapidly. In fact, a mower was setup to mow at 0.450 inch so that we could evaluate the impact of lower height with Mr. Wanner. The results were immediate and clear. Reducing the height of cut and mowing the greens more frequently will encourage the grass to tiller more aggressively to improve density. Additionally, leaf wetness problems that can lead to disease will be greatly reduced with lower mowing heights and more frequent mowing.

At the time of our visit, we recommended an initial height of cut of 0.450 inch that should be reduced every 3-4 mowings. The incremental adjustment will become less and less as the heights are lowered. For example, it is probably safe to lower the height of cut from 0.450 to 0.400 inch. However, the next height reduction should probably only be .025 inch to a height of 0.375. The important thing is that Mr. Wanner closely evaluates each green as it is mowed when the height of cut is reduced. The grass will let you know if you are going too far too fast. Some minor scalping is to be expected. If any major problems occur, the height of cut should be **slightly** increased.

In cleanup passes, we recommend that you only mow every other time to prevent wear patterns from developing. The mechanical stress of mowers turning on the cleanup pass of the greens can cause damage. Reducing the frequency of cut in these areas is recommended.

As the height of cut is reduced, you will get closer and closer to desired playing conditions. The turfgrass will increase density and creep more aggressively as the height of cut is slowly lowered.

2. **Topdressing and Rolling.** The combination of topdressing and rolling will help to smooth the greens to reduce scalping potential as height of cut is lowered. Once height of cut is reduced below 0.375 inch, we recommend light to moderate rates of topdressing be applied to protect the crown of plant as the height is lowered further. The sand helps to insulate the crown of the plant providing an effective height of cut to the plant that is higher than the bench setting. Again, this will help to reduce scalping and have a smoothing effect for the greens.

Additionally, rolling the greens every 7-10 days will have a smoothing effect. Again, you need to be careful with mechanical damage issues. If you notice mechanical damage, limit rolling, not mowing.

3. **Weak Areas.** Some of the greens exhibited areas that have either never grown-in well from the beginning or were damaged by the outbreak of *Pythium* damping-off.

In our opinion, in the short term, you are better off reestablishing these areas from seed than sod. Establishing and maintaining isolated areas of sod on putting greens during the heat of the summer is extremely difficult. While you may have some thin or bare areas that remain on some of the greens, they will improve as the season progresses. Again, purchasing sod to fix these areas may be an investment that does not provide the desired results when the cost is considered. Sodding may be an option if there are still bare areas that need to be addressed in the fall.



Weak areas such as this cleanup on the Fifth green should be brought back up to grade and reseeded. While it will take some time to get these areas in shape, we do not recommend sodding any areas unless you absolutely have to until the fall.

4. **Water Management.** Mr. Quinn pointed out that there are some areas of the greens where seed germination is needed. These areas will require more frequent water inputs than other areas of greens where the grass is already established. To the extent possible, seeded areas need to be hand watered to prevent over watering of the entire green. Remember, water is a primary component of *Pythium* and brown patch development and can increase disease pressure depending upon weather patterns. It

will be important to maintain good moisture in the soil profile as the greens grow-in, but do not overdo it.

5. **Disease Management.** From this point on, your disease program should be strictly preventative. You cannot risk having a setback on your greens because of disease. The results of this can already be seen. Luckily, the damage occurred early enough in the growing season that you will be able to overcome it.

Fungicides to control *Pythium*, brown patch and dollar spot need to be applied on a 14-day interval at the most. Each green needs to be carefully monitored to make sure there is no breakdown in disease control. As far as using sterol-inhibiting fungicides during your grow-in, we do not have a problem incorporating a sterol-inhibitor such as Banner or Bayleton into your rotation. They should not be applied in sequential disease applications.

6. **Insect Control.** While it may not seem to be a big issue at this time, and we did not really discuss it, monitor closely for the occurrence of cutworms or even sod webworms on your new greens. These insects can easily be controlled with an application of a pyrethroid insecticide such as Talstar or Scimitar. If insect populations get high enough, they can cause significant damage to the turf. Monitor closely for these insect pests.

7. **Fertility.** At the time of our visit, we suggested that an application of a natural organic fertilizer such as Milorganite or Nature Safe be made at a rate of 3/4- 1 lb. of actual N per 1,000 sq. ft. These applications will provide a steady feed for the greens over time. If possible, these applications should be made every 14-21 days to maintain growth. Remember, nutrients move quickly through straight sand greens. Thus, more frequent nutrient inputs are needed.

Do not hesitate to apply foliar fertilizers every 5-7 days at a rate of 1/8 lb. of actual N per 1,000 sq. ft. Supplemental potassium applications from sulfate of potash or sul-po-mag which will also provide magnesium should be considered. Sulfate of potash can be applied at 2 lb. of actual product per 1,000 sq. ft. Sul-po-mag can be applied at 4 lb. of actual product per 1,000 sq. ft. Your soil test indicated that calcium, magnesium and potassium levels are low. Considering the soil pH on the greens, gypsum is probably the best source of calcium at this point in time. Applications of 10 lb. of gypsum per 1,000 sq. ft. every 21-28 days should be considered, in conjunction, with the other nutrient applications. In evaluating the growth of the turfgrass, fertility needs are being met. However, supplemental applications will need to continue throughout the summer to help with grow-in and to maintain healthy turfgrass.

8. **Drainage.** Some concern had been expressed over wet conditions in the green surrounds of the new greens due to drainage. Keep in mind that the amount of rainfall in addition to the amount of irrigation water that has been applied during your grow-in is making these areas far wetter than they will be normally. Before embarking on some major drainage projects in these areas, we recommend that you wait and see how these areas perform once the greens are under normal maintenance irrigation. Then decisions can be made regarding additional drainage.

9. **Existing Greens.** Our only topic of conversation regarding your existing greens was planned aeration. In discussing the planned coring of the greens with 5/8 inch coring tines, removal of the cores and refilling of the holes with new sand topdressing with Mr. Wanner, we believe that the cultural programs planned should be just fine.

For the long-term, deep tine aeration of some sort should be employed on these existing greens. Whether drill-and-fill aeration or VertiDrain aeration is used, it will provide benefits. The benefit of drill-and-fill is that the holes are created and filled in a single operation. Drill-and-fill improves water infiltration, especially during short duration rain events such as thunderstorms (remember early July, 2008?). Removing water from the upper portion of the soil profile can be the difference between dead grass and healthy grass under high temperature stress.

FAIRWAYS

1. **Topdressing.** Topdressing applications have been initiated on the fairways in an effort to improve drainage. In our travels, fairway topdressing has gained popularity over the last 5-10 years. The reason is simple. It improves drainage, provides better playing conditions and allows golf cart and maintenance traffic to return to the fairways more quickly after rainfall. While there is a cost associated with fairway topdressing, there are definite benefits to this practice. If resources allow, your fairway topdressing program will be beneficial over time.

2. **Bermudagrass.** The improvement in the quality of cold tolerant bermudagrass in the past few years is dramatic. Patriot and Riviera bermudagrass are providing excellent fairway conditions on many golf courses in our region. When resources are lacking for regular fungicide applications on cool-season fairways, bermudagrass provides an option to have better season long playing conditions with less maintenance inputs. While the dormancy period of bermudagrass is a downside, perennial ryegrass overseeding can be performed to provide better winter color if desired. From a playability standpoint, dormant bermudagrass performs very well. Overseeding really is not necessary. While bermudagrass installation may not be on your short term radar, it

is an option that we believe could provide benefits in terms of fairway quality and cost effectiveness for fairway maintenance at Sussex Pines Golf Club for the future.

CONCLUSION

We plan on returning to Sussex Pines in mid-June to reevaluate the progress of the greens. Our goal is to have your project be a short and long term success. In the short term, reduced mowing heights, good fertility programs, and preventative disease control will be most important to growing-in the greens.

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

Sincerely,

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