JAMES RIVER COUNTRY CLUB
Newport News, Virginia

Visit Date: July 12, 2016

Present: Mo Bsat, General Manager/Chief Operating Officer
        Rob Wilmans, Superintendent
        Robert Burch, Ex-President
        Alan Tanner, President
        Randy Bryant, Green Committee Member
        Steve Suttle, Golf Committee Chairman
        Scott Hebert, USGA Intern
        Paul Jacobs, Agronomist, Northeast Region
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USGA Green Section Mission: The USGA Green Section develops and disseminates sustainable management practices that produce better playing conditions for better golf.
After a relatively slow start to the season, the current conditions at James River Country Club are excellent. The subject throughout the visit was the agronomic changes on the fairways, which have produced positive results. Although putting greens continue to be a principal focus, the transformation of the fairways into some of the best bermudagrass fairways I have observed this season is again, remarkable. It is difficult to pinpoint one reason for improved turfgrass health but I would speculate that the use of growth regulators in conjunction with improved weed control and mowing strategies are all working together. As I mentioned during our visit, as these procedures continue to progress and perhaps additional adjustments are made, the fairway health (and the rest of the golf course) will only continue to improve.

Achieving beauty like this in such a short time is outstanding. If not for the hard work and commitment of Mr. Wilmans and his team, these conditions would not be possible.

That being said, one way to reduce weed and disease infestations is with healthy plants. Mr. Wilmans clearly understands that without healthy plants, achieving the desired playing conditions will be difficult.

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

1. Practice Green. Our customary first stop is the practice green. I am happy to report that the overall conditions of the practice green were good and frankly, better than I anticipated. Simply put, the practice green at James River Country Club sits in one of the worst possible growing environments for high performance turfgrass. Trees, the Clubhouse and a nearby hill all severely limit (or make nonexistent) sunlight penetration and air movement. Both of these elements are critical for high performance turf. That said, other than the still immature sod, the majority of the putting surface was in excellent condition. Mr. Wilmans continues to improve the health of the sod but this is something that will take time.

As we observed, the clay layer is still a limiting factor to water and nutrient infiltration and root development. Until the clay layer is removed, water and nutrients will have a tendency to remain at or above this layer. As we have discussed in the past, water that sits in close proximity to the playing surface predisposes the grass to mechanical and environmental stresses.

![Image of soil profile]

*Notice the black layer in the upper 1/2” of the soil profile. Black layer is caused by excessive moisture creating anaerobic conditions. Frequent needle tine aeration is necessary to reduce black layer but ultimately, the overriding issue is the clay (directly below the black layer) which needs to be removed.*

2. Growth Regulation. As I mentioned in the introduction, Mr. Wilmans has made many positive adjustments to the growth regulator programs throughout the golf course. Not surprisingly, Mr. Wilmans is searching for a way to better regulate the putting green turf,
improve turfgrass health and improve ball roll. In my experience, the growth regulator Cutless does a better job improving the surface texture and density of bentgrass than the currently applied Primo Maxx. Primo is an excellent growth regulator but it does not appear to have the same texture benefits (at least on bentgrass) that Cutless does. To that end, experiment with Cutless on a few putting greens to determine if you are happy with the results.

Initially, apply Cutless at a rate of six to eight ounces of actual product per acre bi-monthly. There is flexibility with the application rate and it can be adjusted based on results. During the season, if quicker regulation is necessary, combine Primo Maxx with Cutless if necessary. Again, Cutless is an excellent growth regulator but it takes a few days to become active whereas Primo Maxx is active within 24 hours. As I said during our visit, I think applying Cutless as your foundation regulator and supplementing with Primo Maxx when necessary would be an excellent regulation program.

When applying Cutless, pay close attention to the bermudagrass surrounds for their tolerance of the frequent growth regulator applications. The only issue with applying Cutless to the putting greens is their proximity to bermudagrass. I do not anticipate any damage with Cutless but there may be some initial shock. Again, I defer to Mr. Wilmans; he certainly knows his golf course better than I do.

3. **Number Four.** Like the practice green, the fourth green was resodded following some turf decline and can still be troublesome. Fortunately, the fourth green was in good condition, even during some challenging weather. The sodded portion of the fourth green has the same limiting factor as the practice green, a sod layer. The same management strategies hold true for the fourth green to break through and remove the sod layer.

4. **Mystery Disease.** Mr. Wilmans indicated that a patch disease occurred on the putting greens following a heavy rain event and high daytime temperatures. We tried our best to determine what the disease may be but is often difficult to identify a disease when the grass is recovering. My best guess is the disease is brown patch, which is favored by high heat, humidity and moisture. It also appeared that a minor anthracnose outbreak occurred on a few putting greens.

During the right weather, even the best of fungicides only last for roughly seven to 10 days. Although some claim to last for 21 days, or more, I would not rely on that if the weather were conducive to an outbreak. As for anthracnose, it is a secondary disease affecting already stressed plants. Again, the combination of wet and hot weather will stress turfgrass plants but so will player and mechanical traffic. As Mr. Wilmans continues to focus on plant health, many of the anthracnose concerns will be reduced.

In the meantime, preventative anthracnose applications may be necessary in conjunction with routine sand-topdressing and nitrogen applications. More so than preventative fungicide applications, the application of nitrogen appears to reduce anthracnose severity and help stressed plants recover.
5. Fertility. Although not a major topic of conversation, we briefly discussed nitrogen fertility on the putting greens. First, the putting greens were in excellent condition on the day of our visit so know that any recommendations I have are perhaps unnecessary. I am certainly not one that makes changes just to make changes. Nevertheless, do not limit nitrogen applications in the name of green speed. It is often easier to achieve the desired speed and firmness with healthy plants. Applying 1/10 to 1/8 pound of a readily available nitrogen source (such as urea or ammonium sulfate) per 1,000 square feet every seven to 14 days is appropriate. In conjunction with the light applications of nitrogen, apply a heavier (1/2 to 3/4 pound per 1,000 square feet) application of nitrogen during spring and fall aeration. This is a good way to get a jumpstart on spring growth and aeration recovery and help with post summer recovery.

FAIRWAYS

1. Surface Management. The most pleasing part of our visit was the health of the fairways. Mr. Wilmans has placed a great deal of emphasis on improving the health of the fairways, and it is unquestionably paying off. Moving forward, continue to focus on improving the surface texture and density of the fairways to promote a firmer surface, which will ultimately improve playability. During summer, perform linear aeration as often as possible to remove thatch and improve surface density. Celebration bermudagrass is an aggressively growing grass that needs aggressive surface management otherwise, the risk of puffy and soft surfaces is increased.

Mr. Wilmans indicated he plans to demo a pull behind Graden to determine if the procedure works for James River Country Club. I can certainly appreciate, and would recommend demonstrating this machine before purchasing, but I am confident you will like the results and ultimately chose to either purchase one or contract the procedure each season.

2. Shade Concerns. Shade is still a limiting factor on a few golf holes and consequently, the areas are prone to decline. Although the areas that declined last winter are recovering, I fear that if the trees remain the risk of resodding the areas again is moderately high. Although trees on a golf course can add beauty, there must be a balance between trees and turfgrass. When trees become a limiting factor to turfgrass health one must ask the question, are they still necessary?

3. Deep Tine Aeration. Deep tine aeration is another procedure that should be performed as often as possible. Deep tine aeration is the process of using a 3/4 inch solid diameter tine (or larger) penetrating the soil eight or more inches deep. This procedure creates open channels for water and nutrient infiltration and root development. Again, this procedure can be performed multiple times throughout the growing season when the fairways are at their healthiest.
GENERAL RECOMMENDATIONS

1. **Bunkers.** Bunkers continue to be a topic of conversation because the liners are failing. Every time the bunkers are raked, there is a high likelihood of ripping an exposed liner and furthering the damage.

Mr. Wilmans is doing a good job of covering the liner with new sand however; this might be a futile effort. Following each rain event, the new sand washes down and mixes with the old sand. Ultimately, the only way to correct the problem is to remove the sand and replace the liner. The question was asked during the visit, “which is more important, the bunkers or the trees?” As discussed during our visit, I would place the bunkers highest on the priority list because of their current condition. The bunkers will continue to be an overriding issue to playability and aesthetic appeal until they are properly corrected.

2. **Weed Control.** Mr. Wilmans continues to establish fine fescue turfgrass underneath the trees to deliver uniform turfgrass coverage throughout the golf course. Not surprisingly, weed contamination is an issue in these areas because most of them are bare soil. Open voids create space for the encroachment of unwanted weeds that are often difficult to control.

![Image of grass with weeds](image)

*Weed encroachment during grass establishment is common. Bare soil provides space for weeds to develop. Combinations of pre and post emergence products are necessary to reduce the weed population.*

In the areas of heaviest weed infestation, a pre and post emergence program is necessary. At the time of seeding, apply the herbicide Velocity at a rate of four to five ounces of actual product per acre. Velocity controls off-type grasses, broadleaf weeds
and bermudagrass. From a postemergence perspective, Fusilade and Sethoxydim are good weed control products that are safe on fine fescue. The caveat with Fusilade is do not apply during summer because it could damage fine fescue. From a preemergence perspective, any of the DNA herbicides (Dimension, Barricade or Pendimethalin) will help control crabgrass and goosegrass but their timing is critical around the seeding date so that they do not reduce seed establishment.

CONCLUSION

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.

Sincerely,

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Green Section, Northeast Region

ELD: mf

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    Alan Tanner, President