

Important Questions About TURFGRASS MAINTENANCE

Dr. Micah Woods sheds light on some of the most commonly faced issues regarding the health and appearance of your greens.

In the course of my work I visit many golf courses and meet many golf course superintendents, owners, and managers. We often discuss turfgrass conditions and almost unfailingly, the same problems resurface time and again with various golf courses. The answer to many of these problems, it seems to me, lies with asking the right questions.

At the best golf courses in Asia, these questions are asked, and the golf course appearance and playing conditions testify to the fact that asking and developing answers to these questions will result in excellent playing surfaces for golf.

For instance, why do we aerify the greens? This is a great question. Perhaps no other maintenance activity irks golfers so much. So, if there is no necessity for aerification on your golf course, for the undisturbed playing comfort of your customers, do not do it.

Having said that, there are a few good reasons to aerify. One is to alleviate compaction or compressed soils. On sand-based root-zones, compaction is rarely a problem. Sand root-zones are designed to resist compaction, and unless gross mistakes were made in the choice of sand for the greens, we do not need to worry about

compaction.

Another reason to aerify—usually deemed the most important—is to physically remove thatch (accumulated un-decomposed organic matter) from the putting green. If thatch is not a problem, then there is no need to aerify.

Good maintenance practices such as regular topdressing, verticutting, applying proper amounts of fertilizer and water, and maintaining a suitable soil pH can help to minimize thatch. Aerifying can also stimulate grass growth by temporarily increasing the air content of the soil and improving water infiltration. With these changes come consequent increases in nutrient and water availability, causing the grass to grow more rapidly. But if good turfgrass maintenance practices are employed, the turfgrass rarely needs the stimulation provided by aerification. Aerification is an essential turfgrass management practice, but always ask the question “Why aerify?” and evaluate the turfgrass to determine if aerification is necessary, before employing this disruptive maintenance work.

Why do we always know the cutting height, but rarely know how much nitrogen fertilizer has been applied? Everyone knows the cutting height of the greens, but the amount

of nitrogen that has been applied to the greens in the preceding weeks and months is something that should be in every superintendent’s mind.

The amount of nitrogen applied is just as important as the cutting height, because nitrogen is the most important nutrient in controlling the growth rate and color of the grass, and in influencing disease incidence on the grass. Too much nitrogen causes problems, as does too little, and the only way to have consistently good turfgrass is to closely monitor the nitrogen applied to the golf course.

Why is the growth regulator Primo Maxx not used on more golf course putting greens in Asia? This product is an important (I might even say essential) tool in creating excellent putting surfaces, but it is not used at near-enough golf courses. Primo Maxx slows the elongation of grass leaves, but it does not decrease photosynthesis. The effect of this is to produce healthier grass plants, plants that are more shade tolerant, use less water, have more leaves and a finer putting surface, and more consistent green speeds.

There are a number of additional benefits to using this growth regulator, and most of them involve enhancements to turfgrass quality

and better stress tolerance. But I find very few courses in Asia use Primo Maxx on putting greens on a regular basis.

Too often I see shabby bunker rakes, tee markers with chipped paint, and faded flags with tattered corners. Why not always have course accessories that look new? These items are relatively cheap to replace, and cups, flagpoles and tee markers could always be repainted by the course maintenance staff. I liken it to a restaurant that has excellent food but old cutlery, chipped plates, and dirty wineglasses.

Would a patron of that restaurant be impressed, no matter the quality of the food? So it is with golf courses, where the course layout and grass conditions may be great, the clubhouse service may be superb, but the tee markers and flagpoles and other course accessories are not in good condition. The customer will realize that something is lacking at that golf course.

We need just a few essential things for healthy golf course turf, namely light, water, air, mowing, fertilizer, and control of diseases and insects. I often ask why the water is not managed with more precision. Grass uses a certain amount of water depending on the weather, the grass type, and the growing conditions. This is termed evapotranspiration, or ET, and is the sum of the water transpired through the grass leaves and the water evaporated from the surface of the grass.

Depending on the grass type and the season, this ET, or the water used by the grass, will range from about 3 mm to 7 mm per day. Yet when I ask how much water is applied to the grass, usually the answer is 10 minutes per day, or 15 minutes per day.

When we see a weather report on the news, the meteorologist will say that yesterday's rainfall was 2 cm, for example, and not that it rained for 1 hour yesterday. On golf courses we should be equally precise, knowing how much water the grass requires, and then applying just that amount of water.

The best golf courses in Asia carefully address each of these course maintenance issues. Aerification programs are based on the requirements of the turfgrass, the nitrogen fertilization rate is given special attention, Primo Maxx is used to enhance turfgrass conditions, course accessories always look new, and irrigation water is applied with precision to create both healthy turfgrass and excellent playing conditions.

But these measures should not be limited to a select few, almost every golf course could see an improvement in playing conditions and course appearance if each of these course maintenance issues were reconsidered on a regular basis. By asking "Why?" it is possible to refine the maintenance practices for a golf course and to identify the optimum maintenance program for a particular facility.

About the author - Dr. Micah Woods (micah@asianturfgrass.com) is the President and Research Director of the Asian Turfgrass Center. He has been a golf course superintendent in China and Japan, been involved with course preparation for many tournaments including the Masters and the Open Championship, and is a renowned turfgrass scientist.



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