

Playing Defense Is a Strength, Not a Weakness

Sometimes knowing what NOT to do is most important!

BY KEITH A. HAPP



Weather is, by nature, unpredictable and many times one must react to how turf responds to adverse conditions.

Golf course superintendents try to prepare for every possible scenario when conditioning turf for play. However, the weather is unpredictable and we often find ourselves reacting to how the turf responds to adverse environmental conditions. It is impossible to prepare for all potential weather factors. Dealing with the unexpected and reacting to turfgrass response is a big part of golf course maintenance. Playing defense is essential at times to successfully maintain the course in a consistent manner.

For the golf course superintendent, playing defense begins with a good offense. Implementing that offense

means having the time and resources to strengthen turf health and prepare it for play. Doing the right thing at the right time, or backing off and not doing something when environmental conditions warrant, can make all the difference in turf performance as the season unfolds. Written golf course maintenance standards should define the criteria for turf performance. The scheduling of aeration, mowing frequency, and where and when water is applied to each playing area are examples of important practices included in written maintenance standards. It may seem like an oversimplification, but aeration stimulates root

growth, timely irrigation allows roots to be maintained and well defined, and reasonable course maintenance standards help ensure that turf health is not compromised by an irrational conditioning request or demand.

All too often, agronomic programs are compromised because necessary procedures are not prioritized to achieve the healthiest turf possible. The golf course is there for golfers, and plenty of play provides the revenue needed to support maintenance costs. Yet, there must be a level of cooperation between golfers and the superintendent to achieve the level of consistency desired throughout the playing



Know the actual mowing height in the field, and this can be accurately determined using a prism gauge. A mower's bench setting is just a starting point when adjustments in the field are needed in response to environmental conditions.

season. That might mean golfers tolerating a little inconvenience while defensive measures are put in place to prepare for worst-case scenarios. Core aerating during the fall or spring in advance of summer stress is the most obvious example.

Most courses look and perform well during mild spring weather, provided that turf survived the winter unblemished. Turf performance during the dog days of summer, however, is another matter. The dynamic nature of turfgrass management dictates that turf managers must react to uncontrollable weather variables come summer, no matter how well he or she prepared in the spring. Those reactions can be as complicated as adjusting fertility plans to ensure the turf thrives, e.g., switching to a fertilizer with a different nitrogen source, or as simple as **not** performing a common task such as vertical mowing because of adverse weather conditions.

SOME GAME PLAN DOS

Schedule aeration when it will be most beneficial for the turf and not based on when it will be least disruptive to play. There have been many articles written about aeration, and

all focus on managing the balance between soil, water, and air. Properly managing this balance is an important defensive measure for turf performance and is especially critical to turf survival during stressful weather.



Topdress more or less in response to the turf growth rate, and be willing to adjust or even suspend certain procedures should environmental conditions become too stressful.

Superintendents now have more options than ever to aerate golf course turf, especially putting greens. Standard aeration and linear aeration injection of sand or water can be used for both short- and long-term benefits. Treatments may be conducted to achieve the desired effect while minimizing surface disruption. However, some level of disruption is unavoidable when completing aeration that is needed to defend against turf decline during summer weather conditions. It is unrealistic for golfers to expect that the turf can perform consistently well without aeration procedures.

Know the actual mowing height in the field, not just the bench setting in the maintenance facility. Do not assume mowers will perform the same in the field during all weather conditions. If the turf swells from humidity, for example, it is more susceptible to scalping and the height of cut may need to be raised to avoid turf injury. Quality of cut is more important than height of cut in the field, and to minimize damage to turf it is necessary to make adjustments. If mowers are cutting too close in the field, then it is only a matter of time before turf damage occurs. Surface performance



Rolling can be a key defensive strategy for putting surface preparation. Operators should exercise caution when traversing back and forth over putting surfaces, and wear damage can be further minimized when starting and stopping points are frequently altered.

is not solely dependent upon mowing height.

Topdress more or less in response to the growth rate of the turf. Know what needs to be accomplished every time topdressing is applied. While the focus early in the season is to dilute organic matter, later in the season the same amount of sand could damage leaf blades rather than protect them. Some topdressing is good because it helps to maintain water infiltration while creating a smoother and firmer playing surface. Too much topdressing can wreak havoc with mowers, require more brushing to move the sand into the canopy, and result in bruised turf that is predisposed to weather stress. The amount of topdressing applied at any one time can be controlled, but the weather cannot. If the turf is bruised or weakened by topdressing at the wrong time, decline during difficult weather can be an issue. Be willing to limit or suspend topdressing operations during stressful weather conditions and you will save grass.

Roll to complement mowing procedures. The use of rolling as a

key component of putting surface preparation is a very effective defensive strategy. Instruct operators to change directions in different places as they traverse back and forth across each green. For example, if rolling is performed four days a week, the spot where the roller stops and starts to change direction should not be in the same location each time. Stopping or starting abruptly can bruise the turf. A defensive sequence for example, would be to roll through the collar the first day, stop and transition on the collar the second day, transition on the green the third day, and target roll near the hole location only on the fourth day. Or, if operators are trained carefully using side-to-side rollers, many can start and stop safely on the putting surface so as to never add mechanical traffic to putting green cleanup laps, collars, or green surrounds. Make every effort to control even the smallest degree of stress from rolling practices.

Putting surface conditions can be improved by brushing, grooming, and vertical mowing. However, use

these techniques with discretion and good judgment, because they remove more grass from the greens compared to regular mowing. Do not allow the vocal minority of golfers to dictate what they think should be done for a short-term effect. It is never bad to have plenty of healthy grass on a putting surface. Ball roll can be managed by implementing timely procedures, and the focus should remain on the long-term benefits a practice provides. For example, vertical mowing can be used to promote upright growth by stimulating new tillering, but this practice can be harmful if grass is already under stress or if stressful conditions are predicted in the immediate future. Predisposing turf to environmental stress is never beneficial, and weakening the grass is never good. On many occasions we hear golfers say, "Don't you think there is too much grass on the greens? Shouldn't we verticut them to thin the stand of grass?" And we have heard equally often from superintendents, "I wish I had not verticut when I did." While timely vertical mowing is very productive, overusing the strategy

can push turf over the edge. Being able to politely say “no” is part of playing defense.

Fertilize the grass. Grow healthy grass first and then condition it for play. Turf will better tolerate stressful weather, disease activity, and other

pests when it is growing at a controlled rate. Research has shown that stress-related diseases such as anthracnose cause less injury to turf when the grass is properly fertilized. Additionally, the first line of defense against weed encroachment is a dense stand of turf.

Fertilizing in a regimented manner, as dictated by soil test results and root health, makes a difference. Timely applications of nitrogen stimulate uptake of other essential nutrients. Be willing to make adjustments that allow nutrients to be applied as frequently as needed. At times, smaller amounts of fertilizer applied more frequently allow turf to better tolerate harsh weather and provide more consistent playing conditions

Set up mowers to limit mechanical stress. If using grooved front rollers on mowers, change to solid rollers sooner rather than later in the season to limit mechanical stress on the greens in preparation for summer. In fact, many superintendents now use solid front rollers on their mowers year-round and still provide excellent playing surfaces.

Monitor equipment operators to ensure that baskets do not become too full when mowing greens. The added weight of grass clippings in mower baskets can cause turf injury or result in a poor quality of cut. Empty the baskets more frequently when grass is growing aggressively in the spring and fall. Mow early in the morning when temperatures are lower, and reduce double cutting if a sharp, well-adjusted mower delivers the desired effect after a single cut. Superintendents now have the option to use mower reels with 11, 14, or 15 blades. Mowers equipped with these new blade options offer a greater level of mowing efficiency without having to rely solely on multiple mowings to achieve desired surface quality.

Golf course equipment managers are an important ingredient for success. They are responsible for setting up mowers that are sharp and properly adjusted before use each day. This is a Best Management Practice (BMP). If mowers are not well adjusted and sharp, the grass will be bruised and torn rather than cleanly cut. Bruises are potential infection sites for disease, and playing conditions are compromised when turf is ragged, torn, and bruised. It is no surprise that sharp and properly adjusted mowers are a key component to an effective defensive strategy that reduces turf stress.



Many superintendents use solid front rollers on putting green mowers year-round to reduce mechanical stress to turf while providing excellent playing surfaces.



Timely vertical mowing can enhance surface quality and turf health. However, doing so at the wrong time of year can result in catastrophic damage.

SOME GAME PLAN DON'TS

Don't mow too low. We have seen a change in maintenance procedures on putting greens in recent years that aid turf health while producing the same or even better playing conditions. Most notably, combinations of mowing and rolling are now used in many instances instead of ultra-low mowing heights and increased mowing frequencies to meet expectations for green speed and putting surface smoothness. This is very positive, because rolling strategies are far less stressful alternatives that can produce the same ball roll effect without mowing too low or too often.

Don't topdress according to the calendar.

When topdressing, first consider the rate of sand to be applied and the method needed to incorporate the sand into the canopy. The same procedures used during the spring may have adverse effects if performed in the heat of summer. Dragging sand on a low-humidity day may cause damage, so pay attention to daily environmental conditions when topdressing. Once again, being able to adjust or say "no" can save grass.

Don't verticut too often or too aggressively. Infrequent use can be productive, while overuse will be harmful. The same goes for grooming. A little at the right time of year works well, but excessive grooming is damaging. When golfers ask if there is too much grass on the greens, simply say "thank you" for the compliment. Having a lot of grass provides options to achieve the desired surface presentation. Having no grass only provides for the use of one option — CLOSED FOR RECOVERY! Superintendents must be able to say "no" when conditions warrant. This decision should be supported by the green committee



Play defense and protect the grass from mechanical wear by using turning boards when regular mowing is performed. Why wait for turf damage to occur when it can be prevented through proactive measures?

chairman, course owner, park administration, or other club officials. After all, you are protecting their primary asset.

Having a course setup statement contained within a course standards document helps when preparing for and defending against uncontrollable weather variables. The business of turfgrass management is dynamic, and adjustments, as dictated by heat, humidity, moisture, and traffic, need to occur throughout the growing season. In a perfect world, it would never get above 85°F, humidity would be 40 percent or less, it would rain only at night, and golfers would agree with everything the superintendent wanted to do. In an ideal world, once a game plan is in place, nothing would change and the grass would be perfect! In the real world adjustment is the norm.

Don't wear out the grass! Playing defense means that certain programs may be needed at specific times of the year. For example, as part of course maintenance, turning boards may be needed to protect turf on putting green collars when regular mowing is conducted. Using these boards requires

increased labor, but it could pay off later in the season if turf loss is avoided. At the very least, have the option to use turning boards on weak areas of the collars or where it is difficult to maneuver mowers.

Don't starve the grass for a short-term effect.

Alter the frequency of nutrient applications to the grass to sustain growth. Uncontrollable factors may dictate that certain strategies or procedures need to be rescheduled because of the weather. For example, it may be necessary to vent, or lightly aerate, the turf more frequently because frequent rainfall causes saturated soil conditions. Venting will promote root growth, and adjusting the fertility program will maximize the benefit to

turf health. Supply readily available nutrients to maintain plant health and resulting surface quality. Don't wait until the turf declines to respond! Grow the grass.

Finally, communicate at every opportunity regarding care of the golf course. Make yourself available to answer questions, even if immediate answers are not available. Use the support systems you have in place to respond promptly and effectively. And when you do respond, avoid speaking in "turfease." Remember, a short period of slower greens is better than closure of a green for any length of time. Defensive management is about preserving turf health when environmental conditions dictate.

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