



When the heat is on we need your help!

A message from the NSWGCSA:

With many golf courses amid their autumn greens renovations it is time to take stock and reflect on what the BOM have described as the hottest and driest summer on record. From a turf management perspective, last summer will undoubtedly be etched in the memories of many a Superintendent, General Manager and Greens Committee Chairperson.

With the loss of turf grass being so widespread over the state this year and the stress that superintendents have endured as well as in many cases the backlash from golf club membership and committees, the NSWGCSA felt an uncontrollable desire to address Managers and Board members directly in the aim that we can educate golfers on the challenges experienced by their superintendents in 2016/17 and to inform them that they were not alone in losing turf and that instead of casting blame on maintenance crews, offer support and understanding. Unfortunately, many top turf managers are opting to leave the industry due to the lack of support and understanding from club members, committee members and managers. The NSWGCSA believe that the reason for the lack of understanding is down to knowledge, it may be that your superintendent is failing to communicate appropriately his/her programs and issues.

There are two parts to this information document, the first section attempts to offer some insight into the challenges that have been the cause of turf loss throughout the State this year, the second part will give some tips on how to improve the relationship between Superintendent and Greens Committee, based on the answers given by members of the NSWGCSA when asked what they would like from their committee. Hopefully we may be able to get feedback from committee members who would like to indicate what they would like from their Superintendent.

NSWGCSA

ABN: 63 365 403 933

PO Box 595

Matraville

NSW 2036

Australia

Email

admin@nswgcsa.com.au

www.nswgcsa.com.au



PART A – CHALLENGES EXPERIENCED THROUGHOUT NSW IN SUMMER 2016/17

Cool-season greens can suffer decline during the heat of summer throughout the country, but the issue is especially prevalent greens. The main causes for turf loss this year have been:

- Heat
- Disease
- Nematodes
- Water Quality
- Cutting Heights
- Irrigation Infrastructure
- Budget Restrictions

Heat

Turf quality on golf greens often declines in hot weather during the summer, especially in areas with high relative humidity. Many factors such as diseases, environmental stresses, soil properties and heavy traffic have been associated with this problem. Soil temperatures above 30°C in the top two inches of the putting surface are often recorded in the afternoon on golf greens on clear and sunny days when the air temperature is above 26°C, this appears to be a major issue. The high temperatures cause the roots of cool season grasses to decline and the growth of new roots is inhibited. The declining roots are more susceptible to root rotting fungi and other stresses and new roots do not grow in hot weather to replace the old roots.

Other factors that have been observed to contribute to the decline are lack of oxygen in soil profiles or in thatch layers, restricted air movement that prevents cooling and drying, localized dry spots, high soluble salts, wilt and diseases. Wet and poorly drained soils have low levels of oxygen which cause roots to drown and provide favorable conditions for disease causing fungi. Roots can die quickly when soil temperatures are in the 30's and adequate oxygen is not present. Decline usually appears first on greens in low areas surrounded by trees or mounds. Canopy temperatures and humidity are usually higher on these greens than on nearby healthy greens in open spaces with good air movement. Wind blowing on the grass removes boundary layers and provides conditions for maximum evapotranspiration to keep the grass cooler and drier.

Disease

Pythium blight is perhaps the most destructive turf grass disease on high maintenance turf such as putting greens. This infectious disease can spread rapidly, especially under hot, humid conditions, killing large areas of turf over a two or three-day period. Basically, a green can look good on a Friday afternoon and by Monday morning the superintendent's world has been turned upside down. Pythium Blight favours conditions of high relative humidity, persistent rainfall or irrigation use and night temperatures in the high 20's. This summer has basically been the perfect conditions for the disease.

Other disease being noticed throughout the State during the summer of 2016/17 have been brown patch and anthracnose. Brown patch, like Pythium, is most common during high night time temperatures and periods of prolonged leaf wetness through irrigation use or rainfall. Invariably these two diseases will attack at the same time.

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Anthrachnose is likely to occur more predominately in poa annua greens but can and will affect bent grass. The disease is active when plants are growing slowly, such as during hot periods, during overcast periods and in high humidity conditions. Anthrachnose can be spread by machinery from green to green.

Nematodes

High populations of plant-parasitic nematodes impair root systems, which in turn affects the health and vigor of turf grass. Symptoms include wilting, decline and slow response to water and fertiliser.

While individual nematode species will have different optima, nematode reproduction and activity is generally favoured by long periods of high soil temperatures. High temperatures can make nematode damage worse by decreasing plant tolerance. As temperature increases, the transpiration requirement of turf also increases, but nematode-damaged root systems cannot supply enough water to meet these demands. Therefore, nematode damage is most noticeable during seasons of high temperature. Soil texture also has a major role on nematode activity, most of the plant-parasitic nematodes that damage turf grasses favour sandy soil. Additionally, tolerance to nematode damage decreases as sand content increases as a function of low water holding capacity and high rate of nutrient leaching. Many putting greens are constructed of >90% sand content, an ideal habitat for most plant-parasitic nematodes. Other areas of most golf courses (fairways, tees, roughs) are usually constructed of native soil, so soil texture is much more variable. Therefore, nematodes problems are most common on putting greens but can occur in other areas where conditions are favourable.

Water Quality

Pure and simple, if you don't drink water, you die! so does grass. Evaporation in turf obviously depends on soil temperature, air temperature and humidity levels, but is also depends on grass type and soil type. Comparing the needs of the grass on your course to that on a course you played on 'last weekend,' may be like comparing apples with oranges.

Water quality deteriorates the lower your dam levels get, often concentrations of sodium and chloride will increase the lower you go. These salts can have a huge detrimental effect on turf quality, especially when soil profiles must be kept saturated during periods of extreme heat.

The soluble salt level is a key indicator of the quality of bore, dam, recycled, or runoff water used for irrigation. High-salinity water causes an increase in soil salts and as soil salinity increases it becomes more difficult for plants to extract water from the soil. Salts 'hold' the water so strongly that plants cannot remove it and therefore appear to be under drought stress even when adequate moisture is present.

Sodium and chloride are the most damaging ions, chloride being particularly toxic. Plants accumulate chloride to the exclusion of calcium, magnesium and potassium, causing nutritional disturbances. In addition to being taken up by the plant, chloride will cause direct injury to the plant as water dries on the leaf, particularly if irrigation is undertaken during the heat of the day.

Cutting Heights

A decade ago, a greenkeeper cutting greens down to 2.75mm for long periods would have been considered, by most, to be insane. Conventional wisdom at that time was that such an aggressive cut would severely stress the grass plant. Normal cutting heights were around the 4mm mark and, if an adventuresome greenkeeper dared to go lower, 3mm would be the limit. But, times have changed.

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We've gone way too far in trying to increase speeds. When the Stimpmeter came out in 1976, the average greens speed in the United States was about 6.5 feet. Twenty years later, according to the USGA, the green speed was 9 feet 11 inches. Last year, regular tournament play speed was 10.5 to 11 feet.

The trend has actually slowed play where is the fun in taking 4 to 5 putts to get off the green? The search for speed has required elimination of some interesting hole locations and created some ridiculous hole locations. Ball mark and old hole recovery is taking more time. And, we're seeing more agronomic problems, including more moss invading *Poa annua* greens and bent grass greens. It may be worth considering purchasing a greens roller and raising the height of cut during stress periods and attempting to use the roller to keep a reasonable pace.

Irrigation Infrastructure

It has been brought to our attention by many superintendents this year especially, the lack of infrastructure around golf clubs in NSW. Many clubs ran out of bore or dam water, and had to either spend an unprecedented amount of money buying potable water or had to sacrifice course presentation and the health of their turf grass by taking the decision to turn off the irrigation system except on greens only.

A few other clubs had pump failures during the heatwave, meaning they had water but no way of getting it on to the golf course.

With the trend set to continue in NSW; for summers to get warmer and drier, it may be prudent for golf club committees and managers to seriously consider auditing their irrigation infrastructure to assess whether it would hold up to another year like 2016/17.

Budgetary Restrictions

Not only have clubs been under strain to purchase water, with disease pressures being high, nematode numbers and Argentine Stem Weevil being a real concern this season there has been the need to increase applications of fungicides and pesticides to protect golf courses from turf loss. This can be a real costly exercise that some clubs can't afford to spend, however the reality is that all clubs can't afford not to increase chemical expenditure.

Some superintendents are being asked to balance the bottom line whilst incurring the cost for extra chemical use, invariably this means sacrificing other resources and in some cases limiting the capability of presenting their golf course to the expected standards, and thus adding to the pressures being directed at them.

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PART B - THE ROLE OF THE GREENS COMMITTEE IN SUPPORTING THE MAINTENANCE TEAM

Sometimes Managers or Boards consisting of doctors, lawyers, bankers and accountants are generally unprepared to knowledgeably deal with maintenance issues. This is not a criticism, more a realisation that as a superintendent it is up to us to communicate and educate to realise support in return.

Superintendents are fully aware that the role of the green committee is essential for the long-term success of a maintenance operation. Being a good General Manager or committee member can be a demanding job, and it requires a significant investment of time and energy to be successful.

The NSWGCSA asked many of their members what they were looking for in a greens committee and what makes a good greens committee, hopefully committee members can take something from the following feedback.

COMMITMENT The most successful committees are stable. It takes time for committee members to fully understand their role and gain an understanding of the maintenance operation and budget. In reality, the tenure for most committee members is too short, and the orientation process for new members is limited at best. This can be very frustrating to superintendents and general managers, who are faced with indoctrinating the new committee members while trying to fulfil their own responsibilities. Committee members should be carefully recruited and should be able to devote the time necessary to participate in meetings and show a willingness to learn. The chair of the green committee should always originate from the committee so that he or she has experience with how the operation works and what is expected.

BASIC KNOWLEDGE OF MAINTENANCE AND BUDGET Those who are serious about their role on the committee have a responsibility to learn about the operation, its long-range goals and objectives, and the people who are responsible for making it happen. Superintendents and/or General Managers should develop an orientation packet for new green committee members if one is not in place. The packet should provide copies of the maintenance standards, maintenance objectives, long-range plans, budget information, glossary of terms, staff biographies, and other resources that prepare the new members for their work on the committee.

BUDGET IMPACTS Many respondents expressed frustration over the seeming disconnect between course conditioning and the money required to provide those conditions. Perhaps this is due to the limited exposure that most new committee members have with the maintenance operation. The green committee plays a large role in allocating funds for maintaining the golf course. Committee members need to be aware of the costs of conditioning and can help prioritize and set realistic expectations.

COMMUNICATION AND TRUST Strong two-way communication that fosters confidence and trust between the superintendent and committee is essential. Electronic communication is good, but it does not replace face-to-face meetings and personal interaction on the golf course. It is difficult to build a trusting relationship with an absentee green chair.

THE WEATHER Those of us who work in the field with living systems take this for granted, and it is understandable that members overlook weather's impacts, but it does affect superintendents' ability to maintain high-quality turf and playing conditions. Weather effects are both direct and indirect on the turf and the maintenance operations. There are also seasonal weather changes to contend with.

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A good green committee will adhere to and support its superintendent's judgment when it comes to decisions on course closure or cart use, or when maintenance practices must be adjusted due to inclement weather.

PLAYING SKILLS DO NOT RELATE Being an accomplished player alone has nothing to do with how to establish good playing conditions or mastering golf course architecture. Understanding what good playing conditions are can be advantageous, but it is also essential to be realistic regarding course conditioning. Course conditions change day to day and week to week despite the maintenance goals and objectives. The green committee is supposed to represent the entire membership, and decisions should always be made in the best interest of the golf course.

AVOID COMPARISONS It is easy to compare conditions and maintenance practices with neighbouring golf courses. But an informed committee will discount those comparisons, realising that golf courses vary too widely to make most comparisons meaningful. The committee should remain patient and focused on the programs that have been developed to produce the playing standards for its golf course.

RESPECT Being a golf course superintendent has always been challenging. Golf course superintendents are expected to satisfy a demanding group of golfers while trying to deal with the challenges of the weather. They maintain a valuable piece of property and oversee a significant budget. Demands are placed on their time, both on and off the golf course. They and their core staff are a highly-dedicated group who deserve appreciation and respect for the job they do. And, as badly or disappointed you may feel when things go wrong, the superintendent and his staff often feel much worse.

SUPPORT The committee should make it known that the superintendent is a professional, and his decisions should be fully supported by the committee. Similarly, good green chairmen do not micromanage. They understand that their role is an advisory one, and they let their superintendents do the managing. A good committee should also keep in mind that their superintendent does not work traditional hours. Scheduling evening or weekend meetings, though convenient for committee members, can be a real burden to the superintendent.

NOTHING GOOD IS EVER EASY Being on the green committee is a challenging and often thankless job. However, the experience can be rewarding, knowing that you are doing your role to help manage the operation's most important asset — the golf course. Good committee members will understand the importance of their role and invest the time to familiarise themselves with the operation and forge a strong working relationship with the superintendent. No, it is not easy being a good green committee member, but few things that are good are easy.

On behalf of our member, the NSWGCSA, would like to thank all committee members for taking the time to read this information sheet. It is our aim to improve the relations between our members and the members of their boards and club. As the industry association, we strive to better educate our superintendents, any feedback on what a committee would like or expects from their superintendent would be greatly appreciated so we can pass that information on to the maintenance crews throughout NSW.

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