

# REMEDYING THE EFFECTS OF SUMMER STRESS



As this year's drought progressed, particularly in the south of England, so golf courses suffered. Hosepipe bans and drought restrictions were granted for several regions, although at the time of writing none had been fully enforced.



Cracked Fairway

In such conditions, Dry Patch on the greens, and how to manage it, becomes one of the main areas of concern for Course Managers and greenkeepers, while drought-damaged fairways also represent big problems. Irrigation system deficiencies were also exposed as the drought continued and temperatures reached into the high 30s.



Dry Fairway

The Open Championship at Hoylake illustrated clearly how dry the turf can become, with no irrigation implemented for several weeks. True links, or traditional golf, was exemplified by the conditions, and the professionals had to change the way they played the game. What a wonderful event!

However, a friend who is an American Superintendent saw it very differently. He called and asked if the Superintendent still had his job! Explaining that, of course, he most certainly did - because the course had been set up that way, exactly as requested by the R & A - his response was that none of his members would have accepted those conditions and therefore he would most certainly have lost his job. What a shame that, for many clubs, the members are more concerned with course aesthetics than the quality of surfaces produced for them to play on.

The drought has caused considerable damage on many courses. In particular, high-wear areas have lost grass cover and will have required renovation work. Much of this work will have been well underway by the end of August in anticipation of decreased temperatures and increased rainfall.

So what remedies are available to Course Managers and greenkeepers to help put things right?

First, removal of the dead and dying grass, prior to seeding, will ensure that the new seed comes into contact with the soil, resulting in better germination. A combination of operations is the most effective way of removing dead material and creating a seedbed, the most common of these being hollow tining and scarifying.

Hollow tining as a renovation operation is normally implemented with the largest tines available, approximately 19-20mm in diameter and 100-125mm long. This operation should be carried out with the machine set to create the largest number of holes, but without destabilising the surface. It is good practice to remove the resulting cores prior to undertaking the next operation. However, if the underlying soil is of a good quality, it can be beneficial to allow the cores to dry slightly and then implement scarification with 2mm blades, set 10-15mm into the surface of the ground. This will pulverise the cores, releasing the soil and creating a seedbed, however the thatch and dead organic material should be removed prior to seeding.

Scarification or, as it is now known, linear aeration, has been around since the 60s, although certain companies would like us to think that it is something new. There are several machines that can be used for this operation. In an autumn renovation programme, where the intent is to reseed the area, the minimum width of blades should be 2mm and they should be set so that they penetrate through the thatch layer into the soil below. The main reason for this is that seed held within a thatch layer with

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no soil contact will be slow to germinate. The seed should either match the sward or contain grasses, which have a distinct advantage over the ones which have been lost.

In some instances, the soils contain so much clay that they will have already cracked along old aeration holes (as pictured). Hollow coring in this situation would be unwise, but once scarified, top-dressed with a sandy loam and then seeded, recovery should be fairly rapid. Once renovation has begun, the treated areas should be roped-off to protect them. Irrigation should be implemented, if possible, but once the seed germinates it is important to prevent it drying out and then dying. Ideally, seed germination should be timed for late September, when autumn rainfall is usually more regular.

Light fertiliser applications could also be applied to assist recovery, but this should be based on understanding individual soils and the types of grasses used to recover the areas.

Dry Patch on greens occurs for a number of reasons, but the one that has been most noticeable this year has been the failure of irrigation systems to cover areas around the perimeter of the greens. Clearly, if this is the reason for stressed and dead areas, then an audit of the irrigation system is required to identify issues which are affecting the efficiency of the system.

Perhaps the sprinklers have reached the end of their useful working life and need to be replaced, or the pumps require replacement or a combination of both.

A collapsed gate valve was subsequently identified on one course as being the main reason why the 'irrigated areas' started suffering, as the flow of water to certain points of the course could only come from one side of the ring main. For any irrigation system over 10 year's old, a qualified irrigation specialist should be brought in to ensure that your system is working efficiently.

The majority of British golf courses will have suffered from localised Dry Patch, either resulting from poor irrigation coverage, from a thatch layer that has become hydrophobic, or from the residual effect of mycelium from Fairy Rings. The recovery of these stressed areas will be accelerated if they are hollow tined, the cores removed and top-dressed.

Several fairway scarifiers are now available which can be fitted with 2mm blades and set 15-25mm into the surface, and some will also collect the resulting debris. Thatch builds up gradually and may take several decades before it reaches a depth that will cause problems for the Course Manager and the greenstaff. But once it does start to become an issue, aggressive management over several years will be required to resolve the resulting problems.

This year's drought conditions will certainly have highlighted many of the above problems. However, they will all benefit greatly from the type of remedial attentions described here.

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## IRRIGATION WATER



**Hollow Tining and Irrigation**



**No Irrigation**



**Top Dressing**