

Through the platform of the Learning Experience Jim Arthur talks about the need to be sensible when it comes to watering...



It never rains...



As a life-time student of Homo Sapiens or even that aberrant strain, H. Viridis, or 'Greens', I am always fascinated by reading between the lines of articles or speeches and to identify the obvious breaches of the first law of logic, ie correct observation must be followed by correct deduction.

When it is not, problems remain unsolved, vast sums of money are spent (or advised to be spent) quite ineffectively because the true cause has not been properly identified.

We are informed that rainwater is acid, so golf greens will naturally become more acidic. Quite apart from the fact that we would need to live in monsoon conditions for much of the year for there to be significant acidification, no account is taken of the fact that today's bought-in top dressings are mostly on the alkaline side (the best around pH 6.8) so very little top dressing would soon neutralise any acidification by rain.

In passing, the whole argument is academic because "the ideal pH is the one you have" - so don't try to waste time and money altering it - certainly never, ever lime fine turf; the result is not just lush grass and earthworms but 'Take-All

Patch for which only time is a cure.

Similarly with irrigation, quite unsustainable claims are made and an enormous pseudo-science has arisen to complicate an essentially simple operation.

I have been wrongly accused of saying that pop-ups have ruined more greens than any other single factor. It is the misuse of pop-ups which is the true problem - and the fact that they make it so easy to over-water at the turn of a dial.

The temptation is greater because too many of today's golfers equate quality simply on the basis of colour - "if it isn't green it must be dead".

In truth "beautifully lush" is a contradiction in terms and anyone who prefers the viridian green so often seen on televised golf to the terre verte of natural courses (which are rarely uniformly green save when over watered, by rain as well as pop-ups!) needs counselling.

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There are a few simple rules which are so logical as to defy contradiction. The first law is to start late and finish early. April is a winter month and if one falls for the temptation to water in an early dry spell - the usual false spring - then sure enough the weather will deteriorate, as we saw in this and many other springs.

Cold wet greens take far longer to warm up when the weather improves than cold dry ones, so growth is delayed. Equally at the other end, it is sound practice to stop all irrigation after the end of August, whatever September brings.

The aim is to go into winter with dry greens and a weeks watering in early September absolutely guarantees the next weeks are torrential, just as cleaning one's car invites rain. Early May is not too late in most years, and only optimists go on watering after the end of August.

If you really feel that greens are being over-stressed in a very early spring, then water (sparingly) in the day, not at night when the effects of late frosts and irrigation can be very unhappy.

So much for timing - what about quantity. A huge industry has arisen,



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based on computer science and nit-picking measurements, calculating the short-fall and reckoning precipitation rates to mini-seconds duration. Many greens on the same course have different irrigation requirements, linked to exposed versus sheltered sites, the permeability of the root zone and related drainage.

Experienced course managers know these different requirements (and less experienced ones can learn) - and set the controls accordingly. However 'scientific' systems may

be, there is no better way of checking than going out and seeing for oneself. How many course managers actually check that five minutes on the dial equate with five minutes actual delivery.

No one suggests spending all night with a stop watch. When I was helping with the presentation for Open Championships, I used to go out, alone or with the head man, at night randomly picking say four greens.

We both got considerable surprises at times - with old control systems failing to deliver or to stop! Look especially for the green which is starting to shine, or conversely one which looks too wet - but all set at the same control time.

Look also for missed areas indicating multifunction heads, remembering that each head waters the far side of the green, so a dry area relates to the head opposite.

I well remember going round a neglected Irish Championship links, where the pro was in charge, pointing out to him at a distance of 100 or more yards which heads were blocked. He didn't last long and the appointment of an experienced links man revolutionised not just the irrigation system but the presentation of the whole course.

Frankly - and do not dismiss my views as those of an old fogey - I have little time for such precision, even if it is really achieved in practice. What we are aiming at is the effect of a good shower once a night every night in drought, not a thunderstorm every three to six days. In practice a good guide is about 4-6 minutes with standard heads delivering 30-40gpm for a 600 m² green - but this is only a guide.

If in doubt, don't water, or use less water. "Over-watering is the cardinal sin of greenkeeping" is a remark made, believe it or not, by revered American Al Radko, late National Director of the USGA Green Section.

There are of course other aspects of irrigation such as syringing to cool greens in day time in summer heat, and watering in dressings. To do this effi-

ciently, it is highly desirable for the irrigation system to be so designed that all the heads come on simultaneously on one green.

To save money by falsely economising in pipe sizes, some systems are designed to use limited flow, by one head coming on at a time in say four different zones of the course. This makes visual control impossible - and many other snags connected with weather and play mean such systems should be outlawed or modified.

Similarly all heads should be easily and quickly adjustable, to cover say surrounds periodically but not permanently - and if you have to wear a wet suit just to adjust a head with the system operating, it simply does not get done.

On this topic, the old idea of watering approaches with greens has long been condemned.

Inherently poorer drainage on approaches and the need to retain firmness while maintaining grass cover means they need far less - usually only three times a week, even if other areas e.g. tees, demand attention.

This brings us to fairway watering - a vexed question. I suppose, where money is no object and proper controls ensured, wall-to-wall fairway watering is not such a criminal waste of money as it would be where budgets are more straitened.

It is all linked to this mistaken chase after colour. If fairways do go brown in a long summer drought, does it really matter, when a few days rain will soon turn them green again?

Watering does not really improve wear resistance, but it may speed up recovery. Fairways which thin out badly in a normal dry summer are likely to be dominated by *Poa annua* - indicative of insufficient aeration and inadequate top-dressing with moisture retaining materials such as fen peat or green waste.

Fairway watering is not an absolute essential unless outside factors prevail e.g. the need to tart a course up for a televised tournament. If it is installed, clearly one must be sure of adequate water supplies.

Water authorities in almost all areas, including those like the South West, with a chronic history of hose-pipe bans, have guaranteed their golf course customers supplies save only perhaps for restrictions over at almost 2 weeks of extreme drought in one year out of 5 or 6.

There are serious objections however to mid-seasonal extraction - most authorities allow water to be held back in storage reservoirs only during winter.

The cost of constructing such features is very considerable, quite apart from siting them.

Maintaining them is not cheap either. Do not be tempted into making them a feature of the course, as when they are partly exhausted at the end of a dry summer they have all the appeal of an African watering hole at the end of the dry season.

My advice is to thoroughly investigate and cost 'mains water' before wasting money on a reservoir. It always pays "to ask the expert" but do see he is truly independent and not a camouflaged representative of an irrigation company - who, however competent, is liable to offer biased advice.

Finally we come to water quality. In this country there are few causes for concern - all that water needs to be is wet. In some mining areas there may be toxicity problems - but a quick test for toxic and saline contamination is not expensive. In the states, it is often a different question.

Using water derived from what they call sodic soils, one sees pH figures greater than 9, high salinity and nice little surprises such as high aluminium and copper.

Desalination plants are essential - but luckily we do not have this problem here. I never cease to stress that green-keeping is simple common-sense and

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those who strive to make mysteries where none exist, do neither the game nor themselves a service.

Defenders of mystiques try to explain that it is all the extra traffic that makes it necessary to apply magic mixtures or apply everything to the level of several decimal points.

They do not fool well trained greenkeepers, brought up on the need to keep courses of the poor side; use water sensibly; aerate like mad (never mind the golfers, they will forgive you when the courses are open when others are shut in winter) and generally follow tried and tested methods proven by a century of research and practice.

Much is talked of thatch and black layer! Water less and make sure it goes deep by aeration and both will disappear - especially if you cut out phosphatic fertilisers!

But that's another story...