

There's none so blind!

ONE beneficial result of such a difficult 'spring' as the one from which we suffered so much this year, is that by emphasising the contrasting effects of different treatments, the effects were made so obvious that only those who had no intention of learning from them could fail to make the correct deductions.

I have for so long been preaching the first law of logic—namely, correct deduction from correct observation—that I really am still capable of a sense of shock when some pundit comes up with a completely unwarranted deduction from a quite correct observation.

Even after watching the destruction of so many of our links and heathland grasses over the past decades, I can still be shattered by the results of even a few weeks drought on fairways that have been senselessly 'farmed' in the past because soil analyses showed 'low' levels of lime or phosphate and, consequently, perhaps even as long ago as a decade earlier, given 'corrective' manurial treatment.

By now, I'd have thought few would disagree that the best golfing turf grows on the poorest soils, but there are obviously still some who remain unconverted.

Misguided treatments

You can see the disastrous results of such misguided treatments on a precise demarcation line. Fertilisers were often applied by an agricultural distributor so that awkward corners were (luckily) missed. After some eight weeks of drought, the fertilised areas of fairways were literally dead and did not recover from rain. Yet within a few days of quite modest showers, the untreated areas (and semi-rough) were green again. You would have thought that even a five-year-old would make the obvious deduction—namely, that the raised phosphate level had encouraged drought-susceptible annual meadow grass since the unfertilised (and excellent) areas showed low phosphate levels and little meadow grass. And, subsequently, that the drought had then triggered off the reaction of any ephemeral or annual to stress, which is to perpetuate its species by flowering, before individual plants are killed, to survive the drought as seed.

Of course, it is not only annual



By Jim Arthur

meadow grass that is culpable. There are many other short lived grasses—early hair grass, annual brome grass, ratstail fescues, bulbous meadow grass—all of which contribute to relatively fine turf until the first severe drought, when they all seed (or form bulbils) and die.

So many times this year I have heard plaintive comments that the fairways looked so well in February and March, but 'went off' in April and by May were 'dead'.

There is an old greenkeeping adage to the effect that "a good drought gets rid of a deal of rubbish" and so it does, in reducing the competitive power of annuals in a mixed sward. But when conditions have been manipulated to favour dominance by annuals, then no longer can the few remaining fine-leaved perennials make use of their inbuilt advantage of being able to recover within days of rain falling, from the fibre. Annuals must wait for sufficient rain to permit seed to germinate and establish, against by then stiff opposition from the 'natural' grasses, which have become adapted over half a million years to taking droughts in their stride and which have had a head start on the annuals.

This is one reason why fairway watering has to be used with great restraint on links and heathland courses. If it is over-used, annual grasses, which would otherwise

succumb, will survive and compete with the natural species and there will be no warning signs of drought damage to indicate changes in flora to the less observant which, in turn, will alter the playing characteristics of the course.

The first principle of not only greenkeeping but, indeed, ecology is that if conditions exist or are created that favour a particular vegetative cover, then those species will dominate. If conditions are altered then the vegetation changes, which is why it is normally rather a waste of time and money to talk of overseeding greens, except where time means money.

If conditions are right, desired species will invade—admittedly, slowly, as some changes are difficult to bring about quickly. If the conditions are not right for those grasses then, while it is quite possible to get the seeded grasses to germinate in September rather than May, they often do not survive for long—especially under the added stresses of constant traffic and close mowing, as on greens.

I have seen too many chronically 'contaminated' annual meadow grass dominant greens, even on some of our most famous links, to pretend that reversal is easy, especially when soil analyses confirm what past history informs—namely, that years and years of gross overfeeding with phosphatic fertilisers cannot be reversed in a few years, especially on a sandy soil.

When we need, say, only 10ppm of phosphate for healthy growth of bents and fescues, it is daunting to be faced (even after a decade of using non-phosphatic, nitrogenous-only, fertilisers) with levels of 450 or even 700 ppm of phosphate—levels which come up at regular intervals.

Dedicated care

Even the best advice and the dedicated care of the most skilled, links-trained head greenkeeper is going to take time to work in such circumstances. This is the danger period when faith may be lost and—whoops!—we are off down the annual meadow grass slope with a vengeance and a decade of hard work is lost overnight.

It is not as if the 'no phosphates'

policy was new. First published in 1903 by Dr Murray, it was not new then, as the oldest method of feeding greens was with soot—a nitrogenous fertiliser.

On so many occasions, old greenkeepers, long since retired, have commented that the ammonia, blood, hoof and horn and iron mix was what they used to use 50 and 60 years ago and, indeed, I was taught it by an old Scots greenkeeper when I joined Bingley in 1946 and he had learned it from his father.

If the drought taught those who wished to learn the folly of heavy N.P.K. fertiliser treatment on fairways and greens, the rain, when it did come, emphasised by cruel contrast those courses where the greens were regularly and deeply aerated. The greens were without a puddle, compared with those next door where management had decided that slitting upset the members too much. They were flooded and unplayable.

Certainly, my experience with the Vertidrain for four seasons in Holland and two in England has emphasised the value of this form of deep aeration, as endorsed by the fact that all the Old Course greens at St Andrews were thus deeply tined, as well as other clubs such as Sunningdale and Woburn who have their own machines.

I always used to say that the best aerator had two legs—to get the greater depth needed to break up the 'plough pan' that forms with constant 'cultivation' at the same depth. But the Vertidrain beats the best man, though it is not intended for use more than twice a year at most and must still be augmented by constant regular slitting. There is no set routine. As with all greenkeeping, it is a matter of response to need and the weather.

Greens that have been deep tined for several years will need less slitting than those that have never been treated, but I doubt if there is ever a case in this country where slitting less than a dozen times a year is not essential. With very lightly played courses on the Continent, the need is less anyway, but the need can only be proven by probing to test for compaction at lower levels.

In passing, it is significant that links greens, which are so firm they could take a tractor over them in winter without marking and where pitch marks are unknown, can still be probed to 12in and more with minimum pressure. However, some annual meadow grass dominated greens I have seen this year are absolutely rock hard 4in below the

surface—which is often thatched to 2in or more in depth!

Another lesson this difficult spring provided was in irrigation techniques. Here, again, the man on the spot must make the decision when to start, but it must be foolish to water greens when there are severe night frosts. I remember one advisory visit this May in Yorkshire where the dry state of the greens and the poor start to growth and consequent recovery from seven months of unrelenting traffic with no rest this year, even from prolonged snow cover, was the subject of criticism. The next day we had a slight cover of snow over the Pennines!

Intensive aeration

However, once it was safe to start watering, it was essential to get that water in deep by restarting intensive aeration (stopped in the cold dry spell as slits would open), by heavier initial watering and by the use of detergents—but reverting to normal levels once the desired penetration and permeability had been achieved. Here, again, the good greenkeepers stood out from the less skilled.

In too many cases, because of lack of planning, irrigation systems broke down on first being used or there were no emergency alternative plans if, for instance, electrical faults developed and vital days (or nights) were lost waiting for sorely pressed troubleshooters from irrigation firms to arrive, instead of implementing prepared contingency plans.

By then, the greens were too dry to accept the water, which ran into low places and then a vicious spiral developed. The best answer to such a problem is to initially anticipate it and, so, take early corrective action. Secondly, hit it hard with everything available to get masses of holes knocked into impermeable compacted spots—or often old water-proofed fairy rings, long since inactive, but with the soil coated with waxy organic deposits—and to use wetting agents *ad lib*.

Some seaside greens have been sprayed overall and will be sprayed again to stop the reticulate pattern, which has marred the appearance of some links greens in the past and prompted unwise and gross overwatering in a misguided attempt at curing the basic problem by sledge hammer tactics, instead of identifying the cause and treating it, not the symptoms.

Speed is the essence of such remedial work. If you wait a week or so deploring the scale of the operation, you are lost. It is a case of

hand work and hard work and using a watering can to get the wetting agent where it is needed—deep in the soil—and repeating the treatment until the problem is cured.

The essential advantage of adjustable pop-ups was never better demonstrated in the windy dry weather. No pop-up system can give uniform coverage under windy conditions, but adjustability is essential to minimise the effect of wind. Even so, hand watering facilities are vitally important. Hand-held hoses are the only way to get the balance of the water where it is needed.

The essence of good greenkeeping is to be able to make inspired and reasonably accurate guesses about the weather, but also to be geared up and ready to snatch short periods of favourable weather, which may not present themselves again for weeks.

Weed control is another very pertinent example of snatching fleeting chances. It is no good waiting for a spell of suitable weather to order the herbicide or to find that the sprayer needs overhauling or even cleaning out.

Too much nonsense is talked about waiting for ideal conditions. I advise spraying any time between March and October when the weather is calm and dry. If you wait for rain (as I am never tired of saying), you may wait longer for it to stop. By that time, most weeds will be flowering, vegetative growth will have ceased and all you kill are the flowers. Of course, we do not spray in windy or wet conditions—the herbicide is still absorbed (admittedly slowly) and once rain comes and growth is stimulated, the weeds die quickly.

Protect the supplier

So many 'instructions on the tin' are put there to protect the supplier or to cope with morons. Which does not mean we should ignore them, but we must use our brains. One recurring fault with weedkilling is the failure of some operators to realise that the amount of water used to dilute the selective weedkiller is irrelevant—it merely acts as a carrier in exactly the same way as 'compost' helps to spread fertiliser evenly.

A hundred times more causes of damage arise from wrong application rates than from using the wrong weedkiller. All that the water does is to make it easier to apply the specified amount of herbicide to a given area and with micro-sprayers it is possible to apply the herbicide neat, virtually

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Jim Arthur Continued...

without any water. But, of course, the risks of local overdosage are far greater.

Perhaps the worst problem this spring, with different grasses growing at different speeds (or not at all), was the impossibility of producing reasonable putting surfaces without shaving greens. At one stage, sickly annual meadow grass growing in separate zones from reasonably healthy bent produced indescribably uneven surfaces and, at others, when it was growing more quickly than *Agrostis*, the variation in speed and texture was equally unsatisfactory.

Shaving greens will admittedly iron out the worst contrasts, at the expense of the health of the turf, which is heavily penalised, if mown too close for long periods—especially if growth is not at a peak.

I can never overstate the fact that putting surface speed (and though it is to be hoped that *all* golfers prefer faster greens, it probably is not true)

depends on texture, which is achieved as much by encouraging the right grasses as by daily (seven days a week) mowing and weekly verticutting when there is reasonable growth.

Another characteristic of many greens this year has been the sickly yellow colour before growth started—and, in some areas, this was not until June—of the annual meadow grass centres, compared with the *Agrostis* (bent) dominated perimeters less subject to traffic and so compaction—*except* on the walk-off side to the next tee.

This emphasises not only the effect of wear and traffic on the grass type (and wear is unquestionably our biggest problem today), but the inability of annual meadow grass on its own to produce even tolerable conditions for 365 days a year. This is why the most important fertiliser dressing is the light ammonia and iron applied in mid-March in the false spring, which invariably precedes the easterlies and the return of winter in April.

Here, again, skill and experience will indicate the start of the short mild spell, which I call a false spring, that occurs every year sometimes for a day or so and sometimes for ten.

More and more such (soluble) fertiliser applications are applied

through the Cushman or Hydromain sprayer, equally to speed up the task so as to snatch a brief spell of suitable calm weather, as to achieve accuracy and evenness of application without risk of scorching.

Another regrettable feature of this difficult spring has been a readiness on the part of some members and green committees to blame their greenkeeper for poor course conditions, when such complaints should more properly be directed at the weather. Of course, there are some disorganised greenkeepers, but no more in proportion than there are similarly ill-qualified members of committees.

What it all boils down to is that a good head greenkeeper is still by far and away the most important single factor in producing a good course. But the best men are at the mercy of that final arbiter, the weather. That does not mean that all greenkeepers are paragons, but they should, nevertheless, be given the tools—in the shape of men and money—to do the job, together with the understanding that, while they may propose, the weather disposes and they, in turn, must be really geared up all the time to snatch fleeting opportunities—all the more important in a difficult season.

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