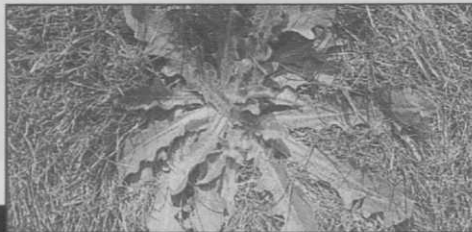
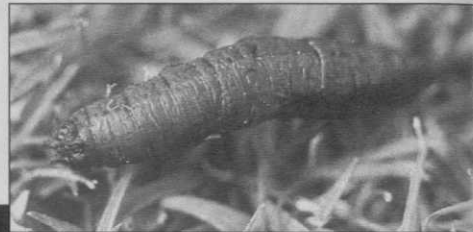




Chafer grub



Cat's-ear



Leatherjackets

PESTICIDES

Misgivings, misconceptions and madness

The Right Approach

7 interest to those in charge of established courses, but it may hopefully fall on sympathetic ears if I plead for far more consideration to be given by architects to those clobbered with looking after impossible contours, envisaged on drawing boards. We need gentle mowable contours for sensible maintenance, not walls of death. My pet hate is the elevated green perched like Ayers Rock on a flat terrain, with a short steep approach, and equally steep surrounds. A ball pitching onto such a steep slope can and usually does go anywhere except onto the green. Yet you still see them being built, often because it takes money to build up a gradual slope – and flair to design in such a way as to avoid the problem.

In passing, why do we tolerate such excrescences as multi-plateau greens, severe slopes and hollows, steep cross-falls and similar gimmicks which not only make putting a lottery but greenkeeping impossible. There is nothing wrong with building fairly uniformly gently sloping (large) greens which will soon develop their own less obvious borrows and are just as good a test of putting skill – as opposed to chance – and so much easier on which to produce perfect putting conditions all year round. With these comic greens, ridges get scalped, hollows become lush and soft, grass species vary as water and fertiliser shed off slopes into hollows, pin placements are minimised and wear increased. Above all, that all-important uniformity of appearance as well as putting surface is lost. Architects, please accept that you do not have to be eccentric to be acclaimed, though judging by a few American eccentrics it helps to be insane to produce such horrors, or at least to have a well developed Oedipus complex.

THERE IS SO MUCH written about pesticides these days that not a month goes by without their mention in trade magazines. Changes in the law relating to their use over the last 20 years have made the subject one very large bone of contention. I believe that the amount of commentary seen is largely due to the fact that users, suppliers, manufacturers and regulatory bodies are operating without benefit of a well-defined, co-ordinated plan, notwithstanding that all parties involved know the ultimate objectives in pesticide control: "Consideration must be given as to whether it is necessary to use a pesticide at all in a given situation and, if so, the product posing the least risk to humans, animals and the environment must be selected." So says the UK Pesticide Guide referring to COSHH, which came into force in the UK on 1 October 1989.

As directives go, I don't think we could be any clearer. As to the how and when, who decides? Without doubt, there are those with misgivings about it all – not least the GCSAA, whom I believe operate under constraints similar to the above. They have commissioned a study of the medical records of deceased superintendents to try to discover any possible link between the use of pesticides and the cause of death. This is being done, I don't doubt, to help expedite the chemical review process. Another clear intention comes across: if they can prove that the chemicals in use are safe, then they wish to be allowed to get on with their job!

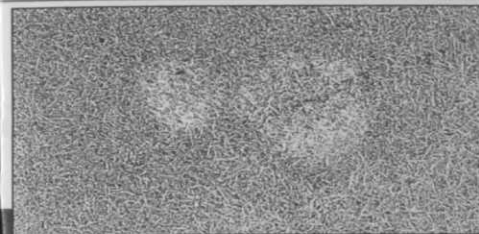
Having heard Professor Noel Jackson speak about turf diseases in the USA at this year's BIGGA education conference, the above move is hardly surprising. Two things he mentioned would raise misgivings with most – namely that a disease called pithium blight can wipe out whole greens virtually overnight, and that in the USA, 'if you lose your greens, you lose your job.' Professor Jackson also pointed out that no-one is safe, since diseases are likely to become as international as the players that play the game of golf. I personally am not prone to panic, but I do keep my locker and desk very tidy these days!

Further misgivings relate to the trade. These can be illustrated by looking at what has been written on the subject of worm-killing this year. The debate

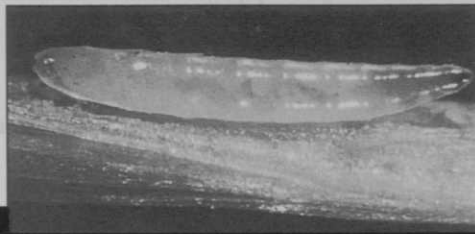
was started by the excellent Jim Arthur, and followed by Kerran Daly who, amongst other things, described the unpleasant and potentially harmful practices associated with lead arsenate. Gordon Irving has subsequently contributed sound common sense in suggesting that it is better to use an effective product once under controlled conditions than one with reduced longevity many times. If I were involved in the supply of vermicides at the present time I would most definitely be rubbing my hands, for having the opportunity to sell ten times as much product to achieve the same result is not to be sniffed at. That is not to say that I believe the trade to be either callous or uncaring, but a professional salesman can do no more than make the most of the situation.

Perhaps my biggest misgiving would revolve around the old adage, 'ignorance is bliss'. Recently I read a front-page report in a trade magazine entitled 'Fusarium attacks human'. I thought at first I had picked up the wrong periodical, and that if I read on, I would find out where Elvis was this week, or if any more aeroplanes had crashed on the moon. But no, this was a genuine, if extremely isolated case. How much more do we still not know, not only about the chemicals we use but about what we are trying to control. Manufacturers and regulatory bodies alike need not write in to say that everything possible is being done – if this was the case, people would live forever and it would only rain at night. I may be accused of cynicism, but the day I read a pesticide label that states 'This product affects only its specific target; it does not affect micro-organisms or the eco-balance of any system, and if you fell into a vat of it, you would emerge smelling of roses' – then, I would feel fairly confident about using the product.

In all seriousness, I am not decrying any efforts in the field of research, but I believe we can never do too much. Anything we can do to accelerate the process of evolving highly safe, highly effective and thoroughly tested products must be seen as worthwhile. Whether it involves money for development,



Fusarium patch



Frit fly



Greater Plantain

or amassing a vast data-bank of results and observations from end-users, surely we all have our part to play. At the same time as there may be misgivings, perhaps some hold misconceptions regarding working without pesticides. As mental arithmetic is in demise since the introduction of the calculator, so the use of chemicals in turf management has become such an intrinsic part of the syllabus that students entering the profession are dissuaded from considering the alternatives. The game of golf has been around a lot longer than pesticides and if the game managed without chemicals once, even given that the job then was labour-intensive and expectations were not as high, it can surely do so again.

Imagine a scenario where, for whatever reason, the use of pesticides on sports turf is completely banned. As an aside, one thought that cheers me in considering a world without pesticides is how it all came about in the first place. If my readings are correct, the earliest efforts in the course of man perverting the balance of nature involved the spraying of cereal crops with sulphuric acid. Taken at face value, this seems about as sensible as connecting yourself to an electricity supply to see if you get a shock. Unfortunately, results proved that this was effective in killing most of the weeds, but not quite so much of the crop. So much for little acorns!

How then do we manage without? You are now looking at your poisons cabinet and seeing the products disappear one by one. Let us start with the easy stuff. We can dispense with the aluminium phosphide by buying some scissor traps – killing moles is essentially a brutal business, whether chemically or mechanically achieved. Forget repellents for rabbits – don't just move them on, shoot them! Total weed-killers – where do we use them? Tree bases, hedges, ditches, peripheries – all can be catered for with weed-blocking materials, mulching, strimming, digging up (and out). Now we start to struggle.

When all sound mechanical and cultural techniques fail, selective weed-killers control the non-grass species in turf effectively. But, could we not help by increasing the frequency of vertical mowing on all areas where weeds are starting to prevail? By more conscientious hand-weeding of fine turf areas, could we not nip the problem in, or before, the bud? Failing all else, could we not fall back on re-turfing?

But what do we do about the big nasty – fungal disease? One option is the no-action policy. Formulated either through lack of funds or for practical reasons (e.g. not being able to access the turf under prolonged snow cover), this relies on early over-seeding and top dressing in the growing season to quickly restore playing surfaces. Perhaps we can con-

sider another possibility. With a suitably large, home-grown turf nursery, prepared well in advance, could we not undertake plugging or sodding of patch-damaged areas? Certain advantages could also accrue. Choice of cultivars for the turf nursery could be made with disease resistance in mind. Constructing the nursery from free-draining materials and making a full root-zone transplant to 'heavy' greens might help in the fight against poor drainage and compaction.

All of the above is not an attractive scenario, since it involves time-consuming methods with possibly unsightly or ineffective results. But if we could all do a little – say, pick out the greens least affected by disease and drop them out of the spraying regime, – wouldn't we be acting more in the spirit of the pesticides regulations? I am sure that many will have better ideas for greenkeeping without pesticides. I certainly hope that something accrues with regard to worms – I am not looking forward to tackling the problem with a paint scraper!

Moving on again, I would like to consider certain aspects of the pesticides issue that, to

Perhaps greenkeepers should formulate their own policy for pesticides, says TONY HOWORTH

me, do not seem to make any sense. Two years ago I started to look at a product containing the fungicide fenarimol. At the time, this fungicide was approved for use on turf in the USA but only for commercial horticulture in the UK. To my surprise, fenarimol was approved this year for use on turf in the UK, albeit under a different brand name. Comparing the two brands, I could discern no difference (from the labelling) in formulation – both products contained the same amount of active ingredient. However, the price of the new turf brand was almost double that of the one previously available. Further, within weeks of the new brand being launched, my supplier advised me that the price of it's twin had just gone up over twenty per cent! I could not see why prices for what appeared to be the same thing should be at such variance. Having asked the question, I was told that the new brand had to recover trial and approval costs. Fair enough, I give credit to the company marketing the product for making the effort to win approval in the first place – the UK amenity fungicide market does seem to have been very static. But I would ask these questions: Are there other

reasonably-priced fungicides in bulk production for the agriculture or commercial horticulture markets which could be approved for use on turf? If the answer is 'yes', and such approval were gained, would the amenity market have to pay through the nose for it? Or are we doomed to using the same products forever and paying prices that reflect a closed-market situation?

One more area that seems to defy the logic of the control of hazardous substances is the public sector sale of pesticides. Having been frightened to death two years ago by pesticides consultant Jon Allbutt, on a BIGGA management course, I resolved to set about obtaining certificates of competence in the use of pesticides and producing risk assessments for the products that we were using on the course. Some £500 poorer and a good deal of time and effort later, I now think I understand something of why Jon was so forthright at the time about the dangers associated with the storage, handling and use of pesticides.

Yet, on a recent visit to an ordinary garden centre, a review of lawn products on offer identified fifteen 'irritants', three 'harmfuls', and a packet containing paraquat, a substance subject to the Poisons Act, with no hazard warning symbol displayed at all! The general public are unlikely to have extensive knowledge of pesticides, any particularly safe or accurate means of applying them, or anywhere to dispose of empty containers except in the bin. Is it right that anyone can buy products to throw on the garden that could also contaminate a water supply, or do away with next door's cat?

If pesticides continue to be offered for general sale, could manufacturers not consider introducing sealed containers of some kind? Could cheap, accurate applicators be developed, and a system introduced whereby a large deposit is charged on containers, refundable on their return to the supplier for safe disposal?

In conclusion, irrespective of what is being done regarding the safer use of pesticides, would it not be better if all parties involved knew what others were doing? Could not the Ministry set out clearly, and on a regular basis, which products were under review and why? Couldn't manufacturers, without committing commercial suicide, make us privy to their plans regarding existing products and the development of new ones? Could not greenkeepers collectively formulate their own policy document, and explore alternatives? Finally, couldn't we all (with the exception of Jon Allbutt) try a little harder for safety's sake?

Illustrations courtesy of Rhône Poulenc – taken from their poster 'Your guide to the control of weeds, pests and diseases'.