

Easing the burden

As many readers are aware, Neil Baldwin has recently entered the world of industry to continue his work on turfgrass diseases from a commercial viewpoint. Whilst Neil was a regular writer for *Greenkeeper International* in the past, this is the first in a series of articles in which he describes current research and development in industry on products to combat turfgrass diseases.

During the winter months, two principal diseases of fine turf may cause particular problems for the greenkeeper. These are fusarium patch and anthracnose, both primarily diseases of *Poa annua*. In the earlier part of this century fusarium patch was described by the scientist who first discovered the disease and gave it its name as "the most common, most disfiguring and damaging disease in fine turf during the winter months." It is a measure of the endemic nature of fusarium patch that despite over 80 years of research and development, it is still the number one disease with which greenkeepers have to contend. The reason for this is that essentially fusarium patch is favoured by cool, wet conditions (ie. the British climate) and to which *Poa annua* is extremely prone to attack. As *Poa annua* is present in virtually all established fine turf, often comprising the major part of the sward, it is not surprising that the disease may cause severe problems.

In contrast to fusarium, anthracnose is a more recent problem. This disease was first seen on a cricket square in the 1950s and has become a problem on golf greens over the last few years. Anthracnose is favoured by low fertility, poor drainage and heavily worn, compacted surfaces. Given the low fertility programmes that are currently in fashion, the exceptional play and wear to which courses are subjected, and the ever present *Poa annua* which is highly susceptible to the disease, it is no surprise that anthracnose has given problems.

One feature of the 1993 season has been the high rainfall in most parts of the country for most of the season. Whereas fusarium patch and anthracnose are usually confined to the autumn, winter and early spring, disease attacks in this exceptionally wet year have occurred on many courses throughout the playing season. This is especially true on inland parkland courses, where greens are built in the traditional way and surface drainage has not been able to cope with the longer than normal rainfall patterns. One result of this has been the use of fungicides on a routine preventative basis in an attempt to combat both diseases. Whilst preventative spraying is not normally recommended, this season has proved an exception to the rule and good results have generally been produced in this way. In the UK, greenkeeping is perhaps 10 years

behind agriculture in the range availability of effective modern fungicides, though this situation has changed slightly and 1993 saw the introduction of fenarimol for control of fusarium patch, red thread and dollar spot diseases. This highly effective material has already seen widespread usage and won many favourable reports.

Currently several UK agrochemical companies are developing new fungicides for use on turfgrass. These experimental materials are highly effective at lower dose rates than those products currently available. In particular, certain new fungicides appear to have curative properties, ie. they can clear up established disease infestations, a property current fungicides lack. It is hoped the new fungicides will clear MAFF registration procedures in the next couple of years, for new and effective products are certainly needed.

In these environmentally conscious days, increasing attention has been focussed on non-chemical means of disease prevention and control. Whilst such methods are not intended as replacements for fungicides, recent research has shown that they can certainly reduce the incidence and severity of disease in fine turf situations.

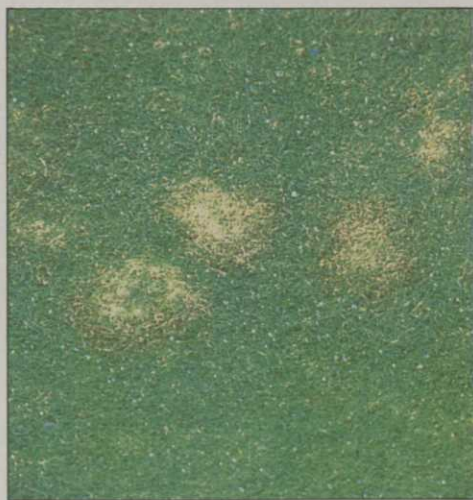
In the USA there has been several research studies on the potassium situation of turfgrass. Currently these requirements are usually determined by soil analysis, with adequate potassium applied as part of a fertiliser programme. However, when excessive potassium is applied, less disease and increased wear resistance has been observed. It is this observation that has led to current research on the dis-

ease implications of supplying excessive potassium. This hopefully could be incorporated into fertiliser programmes and therefore is of obvious interest to fertiliser manufacturers.

Another technique for disease prevention in the UK is the recent launch of cosmetic or green-up products, based on chelated iron and iron sulphate in combination with wetting agents. It is well known that iron sulphate, through its acidification properties, will inhibit fusarium patch. Now cosmetic treatments combine this effect with the dew dispersal properties of the wetting agent component and can therefore help prevent disease.

Another interesting advancement is the development by BIGGA of a disease identification manual, the most up-to-date available on the subject, which it is anticipated will be available in the new year.

In conclusion, there are several promising avenues of research in industry that aim to develop new treatments for turfgrass disease. Whilst progress in this area is never quick, it is hoped that new fungicides in particular will soon find their way to the greenkeeper.



Remote controllers are highly effective

Greenkeepers are finding the new remote version of the CIC range of controllers highly effective. The unit provides remote operation of the solenoid valve, avoiding the need to lift a valve box lid to operate the sprinklers manually. The CIC range has the facility to change the EPROM as new functions are available, for example the latest issue has the remote facility together with a global percentage key. The greenkeeper enters the 'remote' mode on the controller, then all decoders are active. By entering the decoder number, or entering 'OO' on the hand-held unit, if the decoder number is not known, the decoder will then be activated, which in turn operates the solenoid valve and sprinklers. Existing CIC systems can be upgraded by fitting of remote decoders - all CIC decoders are programmable and interchangeable between models. Details: 0858 463153.

SISIS on the up

Orders started flowing in almost as soon as the deal was done on SISIS Equipment's acquisition of the worldwide licence for Squier land clearers and beach cleaners.

Squier machines are used for stone removal prior to golf course construction, among other uses. They will now be produced by SISIS at their plant in Cheshire.

Two thirds of the Squier range is used in the landscape market. Call SISIS on 0625 503030 for details.

Contacts in north

Standard Golf (UK) Ltd and Envirogreen Ltd have announced Kingston Leisure Services Ltd as distributors and agents in the north east. Kingston are at Brunswick Industrial Estate, Newcastle upon Tyne, NE13 7BA, or contact Standard Golf/Envirogreen on 091 217 0070 for advice and details.

Lindum Turf

Colour reproduction on the Lindum Seeded Turf advertisement was not up to our usual high standard on a limited number of copies of the November edition. We apologise to Lindum for any inconvenience or embarrassment caused.