

# The Pythium scare

It must be understood that there is emphatically no recorded incidence of an attack of Pythium blight (caused by the fungi *P. aphanidermatum* or *P. ultimum*) in northern temperate Europe, with only isolated suspect cases in the Mediterranean area. This disease which causes serious problems in the very hot, very humid states of the USA is not to be confused with seedling damping-off diseases caused by other Pythium species.

It should be noted that even in the most susceptible areas of the south eastern States in America, it needs long periods of very hot, very humid weather for the disease to strike. When it does it strikes very quickly indeed, giving little chance for curative or corrective treatment.

While it is rash to deny the first appearance of anything, whether it be a rare bird never before seen in Britain or a new disease one must say that pigs are more likely to fly than for a disease suddenly to appear in circumstances vastly different from those pertaining to where it is a real problem.

It is significant that reports of the disease are coming from all over Britain and Ireland – clearly a scare on the lines of BSE in cattle! This would not matter if it were not for the fact that this wrong diagnosis may prevent action being taken against the real cause of the symptoms being reported as Pythium blight and in consequence needless damage is accepted as inevitable.

One can safely say that the fungal disease attacking the Royal Porthcawl greens at the time of the Walker Cup was not Pythium blight. Had it been, there would have been no greens on which to play and the speed of the devastation would have been phenomenal. It has been described as a disease which you can actually see spreading – it is so quick. Furthermore, the symptoms seen by many were not those of Pythium blight. This first shows as characteristic spots, before it spreads like wildfire. In the words of the leading American mycologist Professor Vargas: "...if you notice large irregular dead patches without having seen spots first, the problem is not Pythium blight and you must look for a different cause."

The fact that the greens affected were not those where root zones had been changed – these were free – indicates that the problem was a soil-borne disease, and Pythium is air-borne. Stress was probably an aggravating factor rather than a cause.

There are perhaps two centres where accurate identification of the Pythium species can be made and these do not get samples. All those who have spent years looking down microscopes know

with a relative humidity of 90% or higher.

to discount what they see. Charitably, what was seen was a secondary saprophytic growth of mould developed in transit!

If this disease has never been seen in Europe by not only ourselves but all leading golf course agronomists who have discussed this with us, then one can safely say that it is unlikely to attack your greens. In fact we would suggest that there is more probability of someone winning the National Lottery jackpot on four successive weeks!

Finally a word of warning to mycologists working in unfamiliar country! Never diagnose a disease on the basis of what you see under the microscope alone, but look at least at pictures or descriptions of the field symptoms. There are very few serious fungal diseases affecting golf grasses in this country so do not make the mistake of thinking we are going to be invaded from the States or Mars. You will all have seen Pythium but not Pythium blight. The Pythium you see is that growing on a mouldy crust of bread – and that will not kill turf!

We can learn, however, from this scare – and not just to get accurate examinations. Grass in greenkeeping is increasingly under stress, but that situation is best handled by sensible sound greenkeeping, which will protect turf naturally. Chronic "fus", it is always claimed, is a sign of bad greenkeeping, but the mistakes may well have been perpetrated by past greenkeepers, who have bequeathed unhappy legacies by past over-feeding and over-watering. Even so, disasters do have a habit of occurring at the most inconvenient times and sympathy must be extended to the sufferers, the chief of whom is the man on the spot. Nevertheless parallel disasters in the past have been diagnosed accurately, but whether we can learn and prevent their repetition is another matter!

We must also hope that Pythium blight never reaches these shores because although there are effective fungicides in the States, if applied in anticipation, they certainly could not be used here because they have no approval for use on turf.

**Jim Arthur and George Shiels**  
Golf Course Agronomists

## Pythium facts

Infection begins at about 18°C and foliar blighting develops most rapidly when air temperatures are in the 29-35°C range.

Things to watch out for: Daytime air temperatures of 30° or more, nighttime temperatures of 20° or above, combined

with a relative humidity of 90% or higher.

The susceptibility of bentgrass to Pythium aphanidermatum increases significantly when grass is being grown at high salinity, outbreaks of Pythium can occur at temperatures and humidities much lower than those thought to be favourable for disease development (Rasmussen and Stanghellini, 1988)

Pythium Zoospores are very small, and move rapidly in free water, and may spread the fungus through a drainage pattern. The pathogen spreads from leaf to leaf by rapid growth of mycelium. Mycelium infected plant tissues move over large areas on equipment and on shoes. Lush dense, growth with high nitrogen fertilisation is especially susceptible to attack, and the disease may become more severe in alkaline soils than in acid soils.

Management practices to reduce the incidence of Pythium include the removal of dew and guttation water. Leaf wetness can also be reduced by two to four hours when the irrigation system is set to begin at least three hours after sunset and completed before sunrise.

Detection is paramount, therefore, consider investing in a microscope so that a diagnosis can be made early. This is achieved by examination of grass leaves for Pythium hyphae.

Also if your irrigation has an on-site weather station this can aid in monitoring temperatures and humidity.

References: Diseases of Turfgrasses by Houston B. Couch. Compendium of Turfgrass Diseases (second edition). Disease Diagnosis by Patricia L. Sanders.

**Seve Schmitz, Course Manager**  
Schloss Myllendonk, Germany

## Montpellier or bust

The Scotts Golf Symposium was acclaimed by all to be a great success on several counts. It was a terrific opportunity to meet greenkeepers from so many different countries – France, UK, Ireland, Spain, Germany, Sweden, Italy, Slovenia, Israel and Denmark providing a very relaxed environment with a European feel to it for exchanging ideas and information and generally getting to know one another. The presence of Dr James Beard was an added bonus to many of us, having read his books it was a pleasure to meet the man in person.

So to the golf tournament on the picturesque but tricky Fontcaude course. Due to time restraints we only played nine holes but everyone enjoyed them-

selves putting on fast greens which some of us had long forgotten since the summer. The back nine proved to be the French greenkeepers' trumpo card, taking the top three places with over 20 points each. Those who took part in the golf clinic enjoyed practising on the driving range or perfecting their putting in short sleeves and 24°.

From the three days there still remain two unanswered questions. 1. Did the French players really play from the ladies' tees? 2. Where is Sun City?

See you next year!

**Nic Davies**  
Germany

● Editor: Can't help with the first question but Sun City is in Bophuthatswana, which I believe is an independent state within the borders of South Africa.

## Thanks for a Miracle

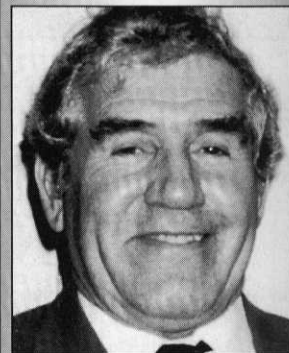
I would just like to congratulate Mike Goodhind on his victory in the Miracle Professional Greenkeeper of the Year competition.

I would also like to convey my sincere thanks to all the people involved at the Awards as they made sure that all the contestants were treated well and made to feel very important.

Can I also say a very big thank you to Miracle Professional for running such an award as I have had a great time participating in it. I think it's a great opportunity to have a good time and to try and achieve a great award. I will certainly be encouraging people to have a go.

**Don Wilson**  
Course Manager, Dyrham Park Country Club

## MY NEW YEAR'S RESOLUTION IS:



**"To see every greenkeeper become a member of BIGGA"**

– Barry Heaney, Wortley GC and BIGGA Chairman