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In situations of prolonged cool wet weather, despite all cultural control measures being implemented, fusarium patch disease is still likely to attack on many courses. Fortunately if the need arises, the disease can be controlled with fungicides, providing they are used wisely and according to the manufacturer's instructions.

Fungicides should only be used carefully and judiciously, for several reasons.

Firstly, too many applications may inhibit other fungi in the turf that are antagonistic to fusarium patch and partially responsible for keeping the disease at a naturally low level.This could be the reason why disease sometimes appears more severe following a fungicide application than previously. Fungicides may also affect other fungi present in turf responsible for decomposing the thatch layer.

Secondly, the repeated use of fungicides with the same mode of action can lead to the development of strains of *M.nivale* resistant to the fungicide. For this reason, fungicides with different modes of action should be considered for successive applications. For example, alternate the use of a dicarboximide fungicide such as iprodine or vinclozolin with chlorothalonil; or any of the systemic fungicides (benzimidazoles) with any of the contact materials (see Table 1). Fungicide resistance is widespread in the USA (where more frequent indiscriminate fungicide applications are made) taking note of the above points will lessen the chance of significant resistance problems developing here.

FUNGICIDE GROUP AND ACTIVE INGREDIENT	SYSTEMIC (S) CONTACT (C)	PRODUCT	MANUFACTURER/SUPPLIER
BENZIMIDAZOLES			
BENOMYL	S	BENLATE	DUPONT
CARBENDAZIM	S	FISONS TURFCLEAR MASCOT SYSTEMIC	FISONS HORTICULTURE RIGBY TAYLOR
THIABENDAZOLE	S	TECTO	SYNCHEMICALS
THIOPHANATE METHYL	S	MILDOTHANE	MAY AND BAKER
DICARBOXIMIDES			
IPRODIONE	C	ROVRAL GREEN/ GRANNULES	MAY AND BAKER
VINCLOZOLIN	C	MASCOT CONTACT	RIGBY TAYLOR
OTHER			
CHLOROTHALONIL	C	DACONIL TURF	ICI PROFESSIONAL PRODUCTS

A range of new fungicides are currently under test at STRI for control of Fusarium patch disease.

Table 1: Fungicides available for control of fusarium patch disease

When considering which fungicide to apply, the current choice of materials can be divided into two groups.

Firstly. there are systemic fungicides which are absorbed and move around in the internal tissues of the plant. Thus, they can protect new growth produced by the plant after fungicide application and consequently they can give excellent protection. As they must be absorbed into the plant before they can work, best results will be achieved during spring, summer and autumn when grass growth is active. Systemic fungicides are best applied at the first signs of the disease or as a preventative spray on occasions when the experience of the greenkeeper predicts an imminent disease outbreak.

Contact fungicides are not redistributed within and will only protect plant parts they come into contact with. However, although best results are obtained when applied at the first signs of the disease, contact fungicides do have a good 'knock down' effect, especially when the disease is active in the winter months. Contact fungicides may give poor control in the warmer months of the year as new growth produced by rapidly growing turf is not protected.

Pink snow mould is best controlled by ensuring that the grass is cut fairly short before snow falls as long grass is particularly susceptible to attack. If the damage done by fusarium patch in the autumn is minimised, this will reduce the amount of *M.nivale* inoculum present for development under snow.

Contact fungicides applied before snowfall may prevent pink snow mould from developing. ■