

## MOSS ON SPORT TURFS

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Moss invasion is one of the greatest problems with which greenkeepers are faced on turf areas under their control. Moss is often an embarrassment to them as its presence offends their professionalism, rightly so as neglect of essential cultural work is one of the root causes. Since these primitive plants have the ability to survive under a wide range of conditions, it is important to understand the factors that account for their presence in turf so that the correct control measures can be taken.

Retention of moisture at the surface is the key factor and may be due to shade, soil conditions or management,

and often to a combination of all three.

Very little can be done about shade on established turf, but should be taken into account when siting a new area. Soil conditions are usually the greatest contributors to water retention. The soil type has on obvious bearing, for even on light soils settlement and compaction over the years tends to seal the surface, resulting in water retention in the sward.

Fibre build up in the upper profile caused by accumulation of debris gives a spongy layer that is very water retentive. This is perhaps the most frequent cause of moss development in the winter following a dry summer—such conditions have prevailed in the last two seasons. The fibre dries out badly and is difficult to wet up again. As a consequence sufficient water remains at the surface for development, but penetration into the



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grass root zone is limited, and thus over a period of several years the overall strength of the sward declines. September to December is the period when most active root development takes place, and it is logical that restriction of water supply at this time will cause roots to become weaker, and seeking surface water, more shallow. This leads to a lack of competitive ability on the part of the grasses and unless remedial steps are taken, moss rapidly gets the upper hand.

There are two main groups of moss. The acrocarpous mosses, which are mostly cushion forming and generally have a fairly high light requirement, so that they are not normally found in a dense sward. This group is symptomatic of neglect (where the grass is starved out and thin) and over-close mowing (which places the grass under severe stress and reduces its strength—very noticeable where high spots are scalped) and the

pleurocarpous or feathery mosses, which are far more general and may exist in quite pronounced patches where the grass is not competing satisfactorily, and often uniformly over the whole area in which moss can invade and take over if it is not checked.

From what has been said so far, it is clear that mosses are very adaptable and whilst chemical control is possible, their elimination will depend on the removal of the conditions conducive to their growth.

Good cultural practices involving year-round aeration using tines appropriate to the season are essential adjuncts of chemical control. These will open up the surface, enabling air and water to penetrate satisfactorily and, by improving air/water relationships in the soil, enable root strength to increase and the grass plant as a whole to become stronger—thereby enabling it to compete on better terms.

**To be concluded**

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