

job." There are various causes for turf failure over which the superintendent has no control.

Severe extremes of weather may be more than any man can cope with. This was so true in 1955.

There may be "built-in" problems, mistakes in design and construction that must be corrected before it is possible to maintain grass.

Sometimes the superintendent knows what should be done but cannot do it because of lack of money, equipment, materials or labor.

Before blaming any one person it is well to study the situation to be sure the cause for failure has been identified correctly. Almost as good as knowing all the answers yourself is to know someone who can help you find the answers and to help you identify troubles in time.

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Q — We have one green that goes out every summer. We can't seem to hold it because all the drainage is to the center and all the water spills out into the center of the approach. We've been advised to rebuild but the members don't like to play on temporary greens. What would you suggest? (Pa.)

A — I would say — "Rebuild." The temporary inconvenience to the members would be tempered by the lasting pleasure of having a good green all year long. Your chairman can help you put this across.

Be sure to build good drainage into the new green. Use tile or a rock base. The subgrade should be contoured to avoid pockets that hold water. The topsoil should be removed from the old green and mixed off the site with sand and other needed materials while the base is being remade.

Then replace the top and contour so the surface drainage operates in at least two to three directions with no pockets to hold water and "scald" the turf.

To put the green into play in the shortest time, prepare in advance a sod nursery of a good strain of bent so that the sod can be transferred as soon as the green is ready. Consult local authorities for specific details on lime and fertilizer in the seedbed and other points not covered here.

Q — We lost a considerable amount of bent after using 2,4-D to control silver crab on greens. Is it possible that the 2,4-D injured the bent? We had exceptionally heavy rain shortly after the material had been applied. (N.J.)

A — 2,4-D is not one of the materials I would recommend for controlling silver

crab (goosegrass) on bent greens. It is quite possible that the use of this material weakened the bent.

Damage is particularly likely to occur when the 2,4-D is washed down to the bent-grass roots. Under other circumstances the damage might not have been so severe.

Since the weather can be so unpredictable it is less risky to use one of the newer and safer chemicals such as di sodium methyl arsonate. This, too, must be used with care but the margin of safety is much greater.

Q — This past summer we had a great deal of trouble with disease. There is quite a heavy mat on the greens. However, the grass seems to be recovering and making new growth this fall so I wondered if we should go to the trouble and expense of removing the mat. (Ill.)

A — It is possible that the grass will recover in spite of the mat, but the new growth will have two strikes against it for the next year because it will be growing on top of trouble which will hide the potential trouble and give a false sense of security.

It would be much better to remove the mat either by multiple aerifying, hand raking or vertical mowing.

Set plugs of new grass close-together in areas destroyed by disease, and follow with a light topdressing to smooth the surface. In the future it would be well to modify your management practices to include treatment to keep thatch and mat under control.

Q — I have heard that not all kinds of sand are good to use in topdressing. What is the proper kind of sand to use? (Canada)

A — You should use a fairly coarse grade of sand; not the fine plaster sand which sometimes is used. The sand should be as coarse as possible without the individual grains interfering with the putting quality of the green.

The quantity of sand used in topdressing is just as important as the quality. There should be a substantial proportion of sand to provide porosity—about 50 per cent to 60 per cent sand by volume is good for topdressing.

The total clay content of the finished material should be below 10 per cent.

Q — We have very sandy soil in our greens. Could we improve the situation by topdressing with peat? (Mich.)

A — The good drainage provided by sandy soil is considered very desirable. If you wish to add organic matter in the form