



THE TEN CARDINAL SINS OF GREENS CONSTRUCTION

By David W. Gourlay

Editor's Note: This article first appeared in the July/August issue of THE GREENMASTER, official publication of the Canadian Golf Superintendents Association. It is reprinted here with permission from Ms. Denise Cochrane of the CGSA headquarters office. Denise spoke with Mr. Gourlay prior to authorizing our use. Thanks to both of them.

It would appear obvious that we should rename this feature FROM ACROSS NORTH AMERICA!

There is a Wisconsin connection here. Mr. Gourlay's father, David S. Gourlay Sr., received the GCSAA Distinguished Service Award in Phoenix at the same time our own Dr. James R. Love did. It is a small world.

1. Using a rootzone medium with poor physical properties. It is highly unrealistic to expect the turfgrass to perform to its potential if one or more of the physical properties is limited. Laboratories test the infiltration rate, moisture retention rate, pore space distribution and bulk density value to insure they meet your specific requirements. Turfgrass grown under ideal physical conditions will recover from stress at a higher rate than turfgrass grown under less than ideal conditions.

2. Using a rootzone medium without correcting any chemical deficiencies. When looking at the chemical make-up of your rootzone medium, remember the word balance. In other words, avoid planting the turfgrass without correcting any chemical imbalances. It is always harder to correct any deficiencies after the turf is established. Avoid using calcareous sands if possible. These sands are usually extremely high in calcium which raises the pH of the rootzone to an unacceptable level. Also, in areas of acid rainfall, the calcerous sands will break down, and a deterioration of the physical properties will occur.

3. Using sphagnum peat moss. Sphagnum peat moss is hydrophobic, relatively undecomposed, and has only a very limited amount of microbial activity in it. Being hydrophobic, it is extremely difficult to blend into the medium. Once blended, it has been shown to plug up the non capillary pore spaces (air space) due to its fibery nature.

4. Not including the apron in the green's construction. Always include the apron in the construction of the green. A 90 degree edge should be included to insure adequate moisture retention in the apron, as a wicking action from the heavier soil around the perimeter will dry out the apron. This will help to avoid hand watering in the hot summer months.

5. Using improper drainage stone. Use only $\frac{3}{8}$ " - $\frac{1}{4}$ " of clean, clear pea stone in the drainage system. The purpose of the pea stone is to insure wa-

ter drainage away from the rootzone medium, and to create a perched water table. Without the pea stone, the dry subsoil will draw water out of the rootzone medium which will lower the water retention of the mix.

6. Using a roto-tiller. Never use a roto-tiller to on-site mix your amendments for rootzone medium. A uniform medium can never be produced by this method. This procedure also produces a double-perched water table in your green's profile. The top roto-tilled medium has to become saturated before any water enters below into the untreated medium. This creates a more complex management program.

7. Sodding a new green. Never sod a new green unless the sod is grown on **exactly the same rootzone medium** as the green. Sodding using a different growing medium will also produce a double perched water table.

Seeded greens can be put into a higher level of playability faster than sodded greens, at a considerably lower cost. Believe it or not!

8. Using uncertified, or inappropriate seed. Always use the highest quality seed available. Also use the variety of seed that best performs in your par-

ticular region. The reasons are all too clear.

9. Poorly designed greens. Two main problems in the design of greens are: making them too small to withstand the expected traffic, and secondly, putting too much slope on the green.

The most popular size of green is between 5,000 square feet and 7,500 square feet. Seldom are smaller greens able to achieve the same degree of success in turf quality as larger ones.

The slope on the pin positions should not exceed two percent. With the high standards in green speed, a slope of more than two percent will not stop a rolling ball.

10. Treating a new green like an old green. New greens generally require more fertilizer than older established greens. Be aware that the added fertilizer and water can lead to added disease. Caution must be used to maintain a proper balance in turf management. As the turfgrass becomes established and a healthy micro-organism population is achieved, the turf management on these greens becomes easier.

4 fl. oz./1000² ft
+
4 oz./1000² ft



Outstanding,
long lasting
control of
dollar spot,
brown patch,
pythium and
more.

RHONE POULENC AG COMPANY

Brayton Chemicals, 815-654-0412

Chipco Representative, 815-923-2662

Horst Distributing, 414-849-2341

Reinders Brothers, 414-786-3301

Wisconsin Turf, 608-752-8766