

# Winter's toll on bermudagrass established

The past winter was one of the most severe on record, especially from the standpoint of turfgrasses, bermudagrass in particular. Some assessments of injury in the northern most limits for successful bermudagrass culture have estimated damages as high as 20-50 percent winterkill.

Many turf areas were either exposed to cold dry winds or were covered with a layer of ice. The exposed areas tended to suffer winter dessication while the ice covered turf may have suffered from ice encasement. Some ice related damage was observed on several golf course greens as a result of gouging the turf in an attempt to remove the ice cover.

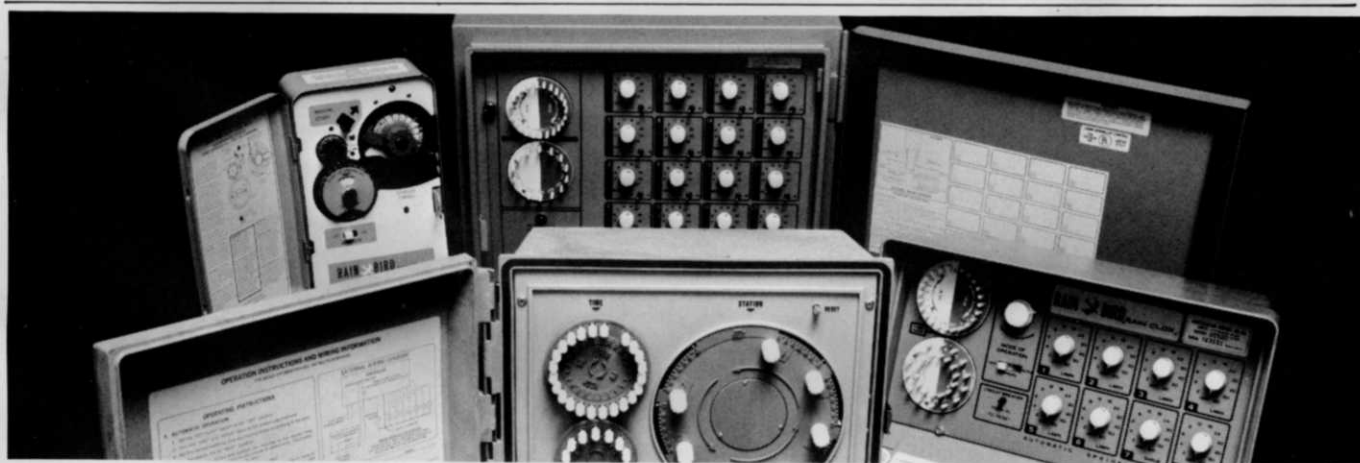
Adequate levels of potassium and phosphorus are important in the winter survival of bermudagrass. Many areas sampled showed a deficiency. Soil tests also indicated that winterkill was greatest where the pH was lowest. When the pH drops below the optimum 6.5 for turf, the availability of potassium, phosphorus and other plant nutrients is effected.

When nitrogen was applied late in the fall to keep the grass green longer, winter hardiness was decreased. High nitrogen applied thusly stimulates plant growth at the expense of tissue hydration and decreased carbohydrate levels. Past winters have been relatively mild

and dangers have been minimal. Not so this past winter!

Exposure also contributed greatly to the winterkill. The greatest amounts were observed on northern slopes where little or no snow accumulated. Heavily trafficked areas were observed to suffer more damage than adjacent areas with little or no traffic.

Up until the middle of May it was very difficult to determine the extent of injury to a bermudagrass stand. In many cases, recovery of the bermudagrass comes from crowns or rhizomes instead of from stolons. This takes longer and resulted in extremely slow spring green-up in some areas. □



## With Rain Bird® controllers, lush landscapes are just a matter of time.

Our controllers help everything grow greener. Just like clockwork.

Whether you need our dual master unit that controls up to 36 satellite units, our basic three station controller, or anything in between for commercial, residential or golf course applications, Rain Bird covers the field — without wasting a drop.

That's because our entire line, including the models you see above, all feature calendars, 24-hour clocks and timing dials that let you select the day,

hour and length of rain at each station. And, many of the controllers are capable of shutting down the system automatically when nature pours it on.

Best of all, every Rain Bird® controller is a dependable, hard-working disciplinarian that means satisfaction — for everyone.

So exercise some timely control out on the turf with Rain Bird controllers. Contact your local Rain Bird distributor for complete details.

**RAIN BIRD®**  
Bringing new ideas to life.

Circle 133 on free information card