

leaky seams. The gel clings to soil particles and builds up an impenetrable barrier to the water flow, thus stopping the leak.

We chose to try the mixed blanket method. After clearing the bottom of debris and large stones, we found it still too moist to work the existing soil satisfactorily. The fact that we would soon have to fill the pond and the possibilities of rains keeping the soil wet forced us to try and spread a pure blanket of the material over the bottom and inside slope.

It had been suggested that we apply three pounds per square foot. We used over four pounds. The area was marked off in squares sufficient in size to take a full bag of material. This made it easy to spread by rake as each bag was spilled in individual squares. As mentioned earlier, the muck bottom was too moist to work. We simply covered the corner area where the leaks persisted and closed the gate to allow the pond to fill.

It was interesting to watch the material as the water reached it. The first day it appeared to have many small burrows as though worms were tunneling through it. After about four days of water coverage, the burrows had enlarged greatly, looking like tunnels a muskrat might make. It was an ugly looking mess for a while.

Constant checks of the seepage area revealed

at first the flow of water, but in about a week from the time the pond had completely filled, all areas had stopped seeping but one. Eventually it stopped, but started again a few weeks later for a short period and then dried up. A couple of times we have found indications of slight moisture, but no real leak. It appears now that this moisture is coming from a nearby green and sand trap that drain to the area, and not from the pond.

We are about ready to cover the ditch and cross off one more problem solved on the golf course. If you have a similar problem, give bentonite a try; you may be surprised at the results.

#### THE AUTHOR

Ted Roberts' interest in golf course maintenance and management began early; his father was Superintendent at LuLu Temple Country Club in Philadelphia. Roberts is currently a USGA Green Section Committeeman; he is a Past President of the Golf Course Superintendents Association of America and of the Philadelphia Association of Golf Course Superintendents. He has written many articles on golf turf care and is a sought-after speaker at turfgrass conferences.

## SUPER SAM

by Paprocki

