## Mother Nature Can't Drive a Stick...

By Bob Vavrek, Agronomist, USGA Green Section

Or so it seems, based on how she ground the gears and popped the clutch when spring abruptly shifted into summer this season. Snowmelt did not occur until well into March and then the weather remained cool and wet through the middle of June. Standard work apparel transitioned from insulated Carharts to Bermuda shorts within a few days. When warm, well, hot weather finally arrived the abundant rainfall disappeared and the heat indices climbed into mid-to-upper 90's on a consistent basis. Consequently, superintendents have had to contend with two completely different strategies for managing turf so far this year.

To make matters worse, roughs and fairways at many courses did not enter the season in particularly good condition due to extensive injury caused by pink and gray snow mold. The damage was extremely slow to recover due to cool temperatures and very little sunshine during April and May. The thin, slowly growing turf was an open invitation to weed encroachment. Dandelions were a concern early in the season, but clover quickly developed into the number one problem when the hot weather arrived. Crabgrass is beginning to compete for the most troublesome weed award now that everyone has experienced a prolonged period of hot, droughty weather.

Providing golfers a consistent putting surface has been a challenge all year. *Poa annua* roots did not have much opportunity to develop during spring because of the waterlogged soil conditions. What little root growth did occur quickly died back when the hot weather arrived. Careful hand watering and timely applications of fungicides were able to keep weak, shallow rooted *Poa annua* playing surfaces alive for a while during the extended period of heat and high humidity this summer. By early August, however, annual bluegrass was living up to its name. A little cart traffic during the heat of the afternoon or a sprinkler head that failed to turn the previous night was all that was needed to push the turf over the edge.

It was no surprise to find colonies of fine-textured *Poa annua* beginning to die back on greens during early August after four weeks of constant stressful weather. *Poa annua* in collars and intermediate roughs have thinned out significantly as well. Pythium, brown patch, anthracnose, and summer patch have certainly caused a fair amount of injury, but the lion's share of the damage was brought about by traffic, drought, and heat stress.

USGA

From the golfer's point of view, the greens, tees, and fairways were soft and puffy all season because of the heat, humidity and the need to irrigate frequently. The vocal minorities of golfers who expect and demand unreasonable playing conditions throughout the season are partly to blame for the losses of turf that occurred this summer. A number of competent superintendents were informed, either directly or indirectly, that continued employment hinged upon their ability to maintain fast greens. Consequently, greens have been pushed mercilessly during the heat to maintain speed. Forget about the old days when you could raise the height of cut and switch to solid front rollers on mowers during stressful weather.

Pressure from golfers at some courses to produce fast greens early in the season likely initiated the domino effect of stress that culminated in turf loss



during early August. Ultra low mowing heights. grooming, and rolling operations during May further set back the growth of roots and the thin turf was an open invitation for moss encroachment. It's difficult to control moss on thin turf that needs to be watered every night and again every afternoon during hot weather because the root system never had an opportunity to develop.

A variety of other problems have plagued golf courses this summer as well. Fungicide budgets were depleted rapidly when wave after wave of Pythium blight started to devastate the playing surfaces. All the money spent keeping Pythium in check left little funds available for controlling the bumper crop of cutworms and sod webworms. Populations of these pests were so high at some courses that feeding injury from skunks and raccoons occurred in fairways - a problem usually associated with grubs.

Overlapping populations of different kinds of caterpillar pests and multiple generations of cutworms and sod webworms have complicated pest control strategies. At many courses, a single application of short residual insecticide only provided a few weeks of protection before a different pest or the next generation of the same pest began causing significant injury to greens or tees again. An extra effort needs to be made by superintendents to identify the pest and monitor insect pest populations before treatments are applied to maximize the effectiveness of these materials. One ounce of liquid dishwashing detergent in one gallon of water applied to one square yard of turf is all it takes to document a cutworm or sod webworm problem.

It's not easy finding a silver lining in the dark cloud of turf stress this season. Making a pitch for a new irrigation system will be easier this fall, if you take plenty of pictures and document how much labor was spent hand watering during the summer.

Last year many superintendents wanted the season to last forever - mild temperatures and plenty of timely rainfall. This year, however, the snow cannot arrive soon enough.

