USGA

The Shape of Things to Come

By Bob Vavrek *USGA Agronomistn North-Central Region*

Who knows what the 2002 season will bring? In general, the North-Central Region has experienced exceptionally mild winter weather. The threat of winterkill or severe snow mold injury has certainly not been keeping most superintendents up at night. However, the recent blast of snow and arctic air may or may not be a cause for concern depending on how much insulating snow cover arrived prior to the frigid temperatures. True to form, the potential for winter injury always seems to peak just prior to the opening of the golf season – a time when the turf may have already broken winter dormancy.

The following are several turf management concerns I will be monitoring closely this season during Turf Advisory Service visits.

The spread of Japanese beetles across Wisconsin and into Minnesota

Damaging populations of beetles have already become well established in localized areas of Wisconsin. Damage from adults feeding on ornamentals and trees along with grub damage to turf has been seen on courses around Lake Geneva, in the Madison area, in Eau Claire, and even as far north as Minneapolis, Minnesota. It's only a matter of time before beetles inhabit and cause damage to courses between these sites.

Keep in mind that commercially available Japanese beetle traps, such as Bag-a-Bug, are an excellent tool to monitor the presence of Japanese beetles, but they are not an effective method to control these pests. Time and again I have seen a picket line of traps placed along the perimeter of a golf course with the intent of catching the adults before they enter the property. At best you will be protecting the neighboring golf course from damage by attracting all of the nearby beetles to your site. On the other hand, if you haven't had a beetle problem in the past, a well placed trap on or near the course can help document the arrival of the pest and

give you an advance warning to begin a routine scouting program on the course for grubs and adults.

New Diseases

I'll be on the lookout for several diseases that have caused a considerable amount of turf injury on numerous golf courses across the eastern part of the country over the past several years.

Crown rotting anthracnose – *Colletotrichum graminicola*

Foliar anthracnose, caused by the same pathogen, is relatively easy to diagnose and control. The signs of the disease on the foliage are black fruiting bodies called acervuli that often have protruding spines (setae). The acervuli and setae are visible with the aid of a hand lens.

More serious damage occurs when the pathogen infects the roots and moves to the crowns of the plants. The base of the stem turns black, rots and the plant dies. Controlling this form of the disease is difficult due to the problem of getting the fungicide to the part of the plant where the damage is occurring. Once the crown area is infected the plant will not recover; therefore, fungicide applications do little more than stop further turf loss.

In the east, the severity of this disease has often been associated with intense putting surface management practices such as ultra-low mowing heights, frequent double-cutting, excessive rolling, etc. Entire greens under such stress have been devastated by this disease. Furthermore it is very difficult to control when the fungus is found in the basal rotting stage. Under similar aggressive management practices there is every reason to believe that crown rotting anthracnose will become a problem in the upper Midwest.

Bacterial wilt of Poa annua – *Xanthomonas campestris*

If you're old enough to remember the damage caused by bacterial wilt to Toronto creeping bentgrass greens during the early 80's then you are already familiar with the type of injury bacterial wilt can inflict on *Poa annua* greens under the right conditions. It's the same species of bacteria, but now it has been documented on a number of courses that the pathogen is causing injury to *Poa annua* on greens. The symptoms can be similar to anthracnose and the presence of bacterial wilt needs to be confirmed by a pathologist.

The mechanical damage caused by frequent top-dressing or aggressive mowing operations such as double cutting, grooming etc. will wound the plant and it is believed that the wounds create the entry points for the bacteria. Similar to crown rot anthracnose the greens that are under stress from intense management practices, usually employed to increase green speed, are the greens that thin out from bacterial wilt. The take home message: we are pushing putting surface turf over the edge when striving for unreasonable green speeds for day-to-day play.

Bentgrass Dead Spot – *Ophiosphaerella agrostis*

The third new disease that will likely be diagnosed in the Region soon is bentgrass dead spot. The pathogen has been documented causing injury to relatively new sand based greens in the Chicago area. This fungus can affect bermudagrass as well.

Talk about a disease that will be difficult to diagnose in the field. The symptoms are easily mistaken for dollar spot lesions or unrepaired ball marks...and there is no shortage of either on just about every green in the Region. So, if you think you have bentgrass dead spot on your 20 year old bent/Poa greens, you probably have ball marks or dollar spot. However, this is definitely a disease to watch for on a new golf course.

Doing more with less.

On a final note, many course managers are being asked to make do with minimal or no budget increases this season and some courses have had their operating budgets cut. I will be looking for helpful hints regarding how to tighten the belt and still provide golfers consistent playing conditions during TAS visits this season. In fact, this will be the topic of the Wisconsin Turf Symposium next November.

For example, the budget might be reduced in the area of fungicide applications for fairway turf. You may have to squeeze every ounce of control from a few well-timed treatments. Consequently, using the right spray nozzle and perhaps adjusting the spray volume to optimize the effectiveness is necessary. Spray volume is especially important when attempts are made to control crown rot anthracnose. Up to 5 gallons of spray volume per 1000 sq. ft. of turf is recommended to ensure that the fungicide reaches the target. It will take longer to spray greens and tees, but in the long run save money by optimizing the effectiveness of the fungicide. These are the kind of money saving tips that will be shared during TAS visits, web site updates, and at various presentations I make throughout the season.