

## Director's Column

### High & Dry

by Jim Evans, Supt.

Turnberry Country Club

Creeping Bentgrass *Agrostis palustris* grows well in moist soil but will survive in dry soil for extended periods of time. It can withstand -45 degree temperatures in Canada, 95 degrees with 90% humidity throughout South Florida's long summer, and survive 115 degree temperatures with 15% humidity in Arizona. Creeping Bentgrass ranks as the most adaptable of any and all available to the superintendent. We are just now beginning to realize it's potential not only in Chicago, but throughout the U.S.

Concerning water usage, I foresee a big trend in the dry look for golf courses here in the United States similar to the Scotland links. Limited water supplies for golf courses now exist in certain regions and will exist here in the near future. Water management will become critical. Quite frankly, I think we tend to over-water bentgrass, but few of us have the courage to shut the faucet off. We value our jobs too much.

I wonder what would happen if we let mother nature supply all the moisture, for just one year. Rainfall is far and away more pure than anything you could pump out of a pond or well. Plus the coverage is excellent. However, the golfers wouldn't appreciate hard, dry greens where their 7-iron shots would be bouncing to the next tee. Eventually, golfers in the United States will have to adapt to more of a "pitch and run" type game.

So why do we have irrigation systems? Insurance! How else would we keep the poa alive. However hard we try, the grass on our courses will grow despite us. There's never been a more true statement. We have absolutely no control over the environment, although we try desperately with no avail. Applying 6 cycles or 54 minutes of water per head on greens and tees every third night starts to sound like a broken record by August. When it rains, it doesn't rain 6 cycles, it rains .3" at midnight, and .5" the next morning, and maybe 3.6" the next day during the women's 9:00 shotgun event. Then they have the nerve to ask you why the greens are too wet.

Irrigation systems are a band aid. When it rains one inch, 27,154 gallons of water will fall on 1 acre. Covering the average 140 acres of golf course, 3,801,560 gallons of water will fall. Most irrigation systems cover approximately 60 acres of golf course. To apply one inch on that 60 acres you would need 1,629,240 gallons. Our irrigation system pumps 1,000 gallons per minute, maximum. That's 60,000 gallons per hour. During the longest days of summer we have only 8 or 9 hours of darkness. That allows us to put down only 540,000 gallons per night over 60 acres of turf. That translates to 1/3" of water. Evapotranspiration rates are greater than that on one sunny, warm day. We're fighting a losing battle, with our present systems. We end up watering the top few inches of soil and promoting shallow-rooted, weak turfgrass. Then there are some people who water 10 or 15 minutes per head. What good does that do other than wet the leaves and surface roots?

What we need is a system that can pump 10,000 gallons per minute rather than 1,000. Only then will we be able to come close to emulating a good rainfall. Watering heavily and infre-



quently will provide us with a deep rooted, healthy turf requiring less water and containing less poa annua.

The past couple of years the weather has been unusual when compared to the past 100. Eleven inches of rain last November is not normal. The grass was lush going into winter and then came the second coldest December in recorded weather history. Little or no snow cover during December and January didn't help the situation. Then April arrives and it's 85 degrees and very dry. The poa that died over winter still hasn't totally recovered. But through all of this the grass survives.

This was the second consecutive spring where the weather was dry and warm. The greens, tees, and fairways were hard, and dry, and generally looked poor. Everyone and their dog was screaming for us to turn on the water. The only water they got was rainfall, because we didn't have the irrigation system ready yet. The seven-iron shots were bouncing to the next tee, but the golfers adapted to the conditions, much like turfgrass adapts. Now, I feel like the spring drought was a blessing in disguise. I've never seen bentgrass develop such an extensive root system. We definitely have a greater bentgrass population than last year, which no doubt will be more drought and heat tolerant this summer. Now, I hope we can maintain the healthy bentgrass with a little help from mother nature.

### Anthracnose Causes Early Leaf Drop

Are the leaves of your trees turning brown and falling off? According to Kathy Gass, University of Illinois Horticulturist in Cook County, what you are seeing is probably a fungus disease called anthracnose. Affected leaves have brown, irregular spots. Quite a number of diseased leaves fall to the ground with a few affected leaves remaining in the tree. Usually not all the leaves on the tree will be seriously infected with the anthracnose fungus, comments Miss Gass.

Many gardeners are noticing anthracnose for the first time and are surprised to hear that the disease appears nearly every year. Usually the fungus is not obvious because it attacks in early spring when the leaves are very small.

Anthracnose is a disease closely related to weather conditions. It occurs in cool moist weather. Spring this year started out warm and dry. The anthracnose fungus occurred later this spring due to temperatures in the 50's and 60's accompanied by high humidity conditions late in May. We normally experience this weather in early spring, thus the fungus usually attacks small leaves. Since this weather occurred later, we are now seeing the disease on the larger, full grown leaves.

Control of anthracnose is not very successful and usually not necessary. You may spray trees that are affected every year with a fungicide if you wish, but the time to spray is in early spring, before bud break. This is a preventative measure. Treatment now will not control fungus since the infection has already taken place.

Severely infected and defoliated trees will put out a new set of leaves, so you do not need to worry that your tree is going to die.

The early leaf drop from the anthracnose problem may make it seem like fall, but never fear. Hot summer weather is around the corner and your trees should soon look none the worse for the experience.