

Dr. Bruce Clarke Speaks on Turf Diseases

By Mike McCullough, NCGA Agronomist

While many of the NorCal superintendents attended the Media Day at Wente Vineyards on April 12, I attended the Novartis Crop Protection Turf Disease Seminar at Round Hill Country Club in Alamo. Dr. Bruce Clarke, Extension Turfgrass Pathologist at Rutgers University was the featured speaker. I thought that a brief recap of the diseases covered by Dr. Clarke would be beneficial to those who missed this excellent program.

Summer Patch is a disease that many superintendents encounter each year. This root disease can become problem in the same areas on the course every year. Conditions that favor the development of the disease symptoms are hot and humid conditions, excessive soil moisture, low mowing heights, soil compaction, and poor drainage. When soil temperatures are cooler, the pathogen lays dormant on the outside of the root system; once soil temperatures warm up the symptoms can take up to 6-8 weeks to appear. Cultural control measures include reducing compaction and providing the turf with better growing conditions (i.e. raising the height of cut). Try to adjust the soil or rhizosphere pH to 6.0. Fertilizing with ammonium sulfate or SCU's products has shown some success in the suppression of summer patch. However, be careful when applying these products since there is a potential for foliar burn, especially when warm weather is imminent. Many of the newer fungicides have been effective in controlling the fungus (i.e. Heritage and Compass). Dr. Clarke recommends watering the chemicals in after an application has been made. This practice moves the product into the root zone where it could be utilized effectively.

Basal Stem Rot Anthracnose (ABR) is a common stress related disease. This fungus resides in the thatch and during stressful conditions in the summer an outbreak is very likely. ABR attacks both poa and bent and the results are generally a yellowing and thinning out of the turf. Conditions that favor the development of the disease are any mechanical damage to the turf such as double cutting or rolling, low fertility, consistently wet soils, and compaction. Dr. Clarke mentioned that the use of soft spikes has had positive effects in reducing the incidence of this disease. Cultural practices that help in reducing the disease are increasing mowing heights, reducing mowing frequency, not aerifying or topdressing when ABR is active, and reducing soil moisture. A preventative fungicide program is essential. Start the spray program two weeks prior to stressful summer conditions and continue the program until more favorable temperatures exist. Low Nitrogen applications throughout the disease season can help in turf recovery. It is important to alternate the chemistries of the fungicides when controlling this disease. Many superintendents will

tank mix N and fungicide applications.

A couple of the new diseases on the turf horizon are Bentgrass Dead Spot and Gray Leaf Spot. Bentgrass Dead Spot is a relatively new disease that should grab the attention of superintendents that have new bentgrass greens. It was originally found in 1997 in Maryland and most recently found last year in Missouri, the Carolinas, and Texas. The disease prefers greens that are less than 6 years old and are built with large amounts of sand. Full sun locations and hot and dry weather also favor the development of the disease. The diseased areas get no larger than 3 to 4 inches and look very similar to dollar spot or cutworm damage. The disease is easy to identify as the black fruiting bodies of the fungus are very prominent and can be seen with a small hand lens. The damage generally takes 6 to 8 weeks to heal after an infection has occurred. Any efforts to reseed in these damaged areas are futile as the fungus releases toxins that delay germination. Balanced fertility has provided some relief of the disease. Avoid stress or mechanical injury, excessive traffic, and dragging in topdressing treatments. Some of the newer bentgrass cultivars have shown some resistance to the disease. Chemical control measures include the DMI fungicides on a curative 5-7 day interval.

Gray Leaf Spot is a foliar disease that affects St. Augustine, perennial rye, annual rye, and to some extent tall fescue. According to some local sources, GLS is commonly found on St. Augustine in Southern California. No GLS has been reported on perennial rye in California as of yet. The disease can occur in the spring and continue until fall. Usually the disease occurs in July, August, and September when air temperatures consistently reach 70-80 F. The disease favors young stands of turf with overseeded areas being the most susceptible. Rough areas that are cut above 2.5 inches develop the most severe infestations. Drought-like conditions predispose the turf for infections of GLS. Researchers at Penn State have developed a disease predictor model that will alert superintendents when conditions favor GLS. Culturally you should: avoid irrigating at dusk, do not use PGR's or herbicides during the hottest summer months, mow only when the turf is dry, and remove clippings as frequently as possible. Summer fertilization is not recommended. The newer fungicides will control GLS, which is known to be a prolific spore producer. Currently there are no resistant cultivars of perennial ryegrass. Some of the newer tall fescue varieties have shown some resistance to GLS. /

For a copy of Dr. Clarke notes, please give me a call or email me with a request and I'll get those to you ASAP.