

USGA

What's Up Doc?

By: Mike Huck - USGA Green Section, Western Region

During the fall and winter season, many universities throughout the country host annual turf conferences. In their regions the Green Section staff members attend the majority of these conferences and we share the information through conference notes. This month I would like to share with you some of the information from the 1996 fall turf conferences that you may find of interest here in the western region.

Greens Construction

Dr. Norm Hummel, on quality control measures during new greens construction, suggests that every 500 - 1,000 tons of mix needs to be tested. (For the record, an average 6,000 square foot green will require about 330 tons of mix once compacted.) Norm suggested that the mix be stockpiled, laboratory tested and approved before delivery. Personally, I would still recommend collecting a one gallon sample from each green prior to planting and store it in the maintenance shop as a further precaution.

Growth Regulators

Dr. Fran Rossi of Cornell University, reported that there is evidence of improved carbohydrate translocation to the root system during the fall when *Primo* is used on cool season grasses. Dr. Rossi hopes this work will determine whether or not growth regulators may have a niche use for improving winter hardiness. The rate of *Primo* during the initial trial was reduced from the labeled amount of 0.25 - 0.33 oz/1,000 to 0.01 oz/1,000 (Yes, . . .0.01 oz!)

When normal rates were applied, severe injury and death of the plants resulted, Dr. Rossi commented that "growth regulators are just one step away from being a herbicide" and the adverse reaction of the normal label rates in the fall is due to reduced metabolism and other physiological changes in the plant. Also, *primo*-treated putting green plots at the University of Rhode Island showed a significant reduction of Dollar Spot, even when compared to fungicide treated plots!

Insects

Dr. Potter of the University of Kentucky reported on a new insecticide that will soon be released to the market as MACH 2. The name (MACH) stands for "Molt Accelerating Compound - Halofenozide." This product provides good cutworm control and of even more interest was the better than normal efficacy found on large, more mature grubs, a limitation of many currently available products. The real question is if California will see this compound before the turn of the century.

Chris Williamson, also of the U of K, noted that pre-dawn green mowing can remove a significant number of cutworms. Chris also advocates treating putting green surrounds as opposed to the greens themselves because most cutworm activity occurs following nocturnal migration from the banks onto the putting surfaces. In other words, according to Chris, these little guys are residing in the apron and rough and go "out to dinner" to the greens every evening!

Turf Varieties and Disease

Moving on to the new bentgrasses, Dr. Peter Landschoot of Penn State reports that G-6 and Crenshaw get "hammered by gray snow mold" and a similar response with G-2 was reported in the NTEP plots at Rutgers. At the same time, the Penn State plots showed L-93 and A-1 were at the top of the list regarding Gray Snow Mold resistance. (Good for you folks in the Sierras and Rockies to know!) Dollar Spot tolerance has been poor with Crenshaw, while L-93, A-1 and Providence show improved tolerance. Another interesting factoid comes from Dr. Melodee Fraser of Pure Seed Testing. Both the A & G series grasses have three times the shoot density as Penncross and two times that of grasses like Crenshaw and Providence.

Conventional Disease Control

Several researchers across the country have favorable reports regarding the activity of the fungicide *Heritage* on a number of pathogens including: Summer Patch, Anthracnose (both crown rot and foliar), and Take All Patch. *Heritage* is a new chemistry that is as close to a "biological control" as can be synthesized by man. The original chemical structure was found in a mushroom extract, but it is not practical to naturally produce large quantities of this product for commercial use so man synthetically reproduces the same product. Truly, better living through chemistry!

With this in mind there have been some other interesting reports concerning *Heritage*. Improved seed germination was noted



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THRU THE GREEN

in treated plots several months (Thirteen to be exact) following treatment, as well as Gray Snow Mold activity twelve months after treatment. All this, in light of the fact that the half life of this product is reported to be only one to four weeks! This will be an interesting product to watch as more research is reported.

Biologicals

A great amount of work continues to be put forth on biologicals. The greatest barrier appears to be a dependable system that can deliver live organisms to the field consistently. This was a great point of discussion at the University of Maryland Field Days and was also looked into quite closely in the St. Louis area.

Aside from delivery equipment, water quality appears to be a huge factor in the success or failure of these systems. Potable and well water work best while effluent, river and stream water appear to defeat the system. Great strides are being made in this area with many discoveries related to why the control agents look promising in the laboratory but, often fail in the field. Unfortunately, the solution to these problems appears to be a difficult one. However, with a better understanding of the big picture, success may eventually be achieved. Dr. Eric Nelson also voiced an opinion at the Rhode Island Turf Conference that there may be good reason not to use sugars to feed turfgrasses. Dr. Nelson feels you can actually be the process of feeding turf pathogens ("Fueling the fire," so to speak!)

One final thought on biological agents — if a plant pathogen can mutate and develop resistance to the overuse of a man-made chemical control agent, why then wouldn't the same thing happen from a daily application of a biological? Will biological varieties need to be rotated much like chemical controls? I don't have these answers but feel it is good food for thought.

Hope everything is growing well for you all, and don't forget our upcoming regional conference. ✍

Quick Quotes

"Strangely enough, this is the past that somebody in the future is longing to go back to"

— Ashleigh Brilliant

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