TurfComms

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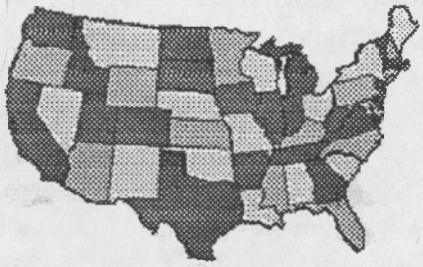

Dec. 23, 2000

PURPOSE: To pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country.

Happy New Year

FIRESCAPING: Interested in planting around the house, golf course, or maintenance building with fire resistant plants. For ideas on planting and landscape design where wildfires might possibly destroy your investment try **California Wildfire Landscaping** by Maueen Gilmer, Taylor Pub., $10.95 as a starting place.

SALINE SOILS: Another article by the authors Carrow and Duncan on handling salty soils and salty water. This one is titled "Leaching for Salinity Management on Turfgrass Sites" and is in the Nov./Dec. issue of the Green Section Record. A little technical but well worth reading a couple of times if you have to deal with these conditions.

AMERICAN SOCIETY of AGRONOMY MEETINGS - MINNEAPOLIS: I have found it hard in the past to attend the annual ASA meetings. They are in November (6-8th, 2000) and

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thus hard to connect with paying Turf Advisory Service visits. This year I registered to go and had hotel reservations and then picked up a client to visit on the way - nice. This is where almost all U.S. turf research papers and posters are presented initially.

The first paper I heard was by the graduate student Zuk of Kansas State U. He talked of research on converting **perennial ryegrass** turf to **zoysia**. Two approaches were used scalping (1/4 inch) and Roundup. Scalping in conjunction with an overseeding of zoysia was most satisfactory if the turf was to be opened for use that year. The Roundup treated areas were best after two years of seeded zoysia growth. Traffic reduced quality severely in both approaches.

The next was a paper on annual bluegrass seedhead management using Ethephon(Proxy) given by Wendy Gelernter of San Diego, CA. She was comparing **Proxy to Primo**. One side result that was not expected was that Proxy at the 2x rate (10oz./M) gave a significant increase in clipping yield. Primo significantly reduced clippings 14 out of 16 dates/location. Proxy at 5 oz/M did reduce seedheads on the coastal locations; but worked less well in desert locations. Proxy proved to be much better then Primo for Poa seedhead reduction on greens at 3, 5, and 10oz/M. It takes 3 weeks after application to see the results and effects last 2 to 4 weeks. Seedhead suppression was better when sprayed in February than in April. When used together Proxy at 5. oz. and Primo at 0.5oz./M gave no phytotoxicity and better activity on Poa seedhead suppression. It appears that this rate of Proxy can be used with even lower rates of Primo for excellent seedhead suppression.

Next we had two papers on **Primo** (trinexapac-ethyl) use. The first was a North Carolina State U. greenhouse study which showed treated plants did not have more nitrogen leaching from their pots than the controls. Treated plants did have more nitrogen in below ground plant parts than controls. Primo did not reduce water use of **419 bermudagrass**.

The second paper was reporting work done on **Kikuyugrass** by L.J. Stowell of Calif. The report was that maximum clipping yield reductions were 21 to 28 days after treatment (DAT). Primo results in much better quality fairways of Kikuyu. Adding a little fertilizer improved quality without significant increased growth.

Next was a paper discussing the use of dithipyr (**Dimension**) for possible ***Poa annua*** control in new seedings of **tall fescue** and **creeping bentgrass**. This was by G.A. Hardenbeck of Purdue. He used rates of 0.28 and 0.56 Kg/ha (1/4 to 1/2lb./A) applied at various Days after Emergence (DAE) of seedlings. In the field they had to wait 10 and 17 DAE on Bonanza T.F. and Providence creeping bentgrass respectively for safe use. Note, their are cultivar differences in the sensitivity to Dimension.

F.H. Yelverten of N.C. State U. studied the **rainfastness** of **Roundup** and decided it was better than that which was declared on the label. Or, in other words, it was effective even if rains came sooner than recommended on the label, at least when used on tall fescue. They did allow that plants with waxier leaves might require a longer time to be rainfast.

D. R. Spak of Aventis provided us with a history and summary of **Ethephon (Proxy)**. This growth regulator was discovered in the 40s. It is stable at low pH(<3.5). (*Ed. It appears wise to acidify water in spray tank before placing in the Proxy.*) It degrades rapidly at high pH and high temperature, and is converted to ethylene a natural growth regulator. It moves poorly basipetal (downward). It inhibits apical dormancy and stimulates lateral growth. Kentucky bluegrass is most sensitive to its grow reduction powers. It can reduce Centipede seedhead production by 61% and it generally has very low phytotoxicity, although second applications are more likely than first to show adverse effects. But avoid use in high summer temperatures. It generally takes 10 to 14 days for the grass to show a response.

Dr. Handly of the Dow corporation discussed the use of triclopyr ester (Garlon) to suppress bermudagrass at overseeding. Rates 1 lb./A or perhaps lower are possible. Trials 5 days prior to overseeding in AZ and SC had no effect on spring greenup when not overseeded. Applications made after the overseeding may work even better.

During the morning of the 7th I attended a symposium labeled **Turfgrass Soil Microbiology**. The first speaker's research concluded that the addition of 2% of non-sterilized disease suppressive soil to a sterilized soil reintroduced and thus raised the sterilized soil to its original suppressive nature. While the third talk concluded that after **fumigation of USGA Greens** it is probably not useful to add microbes back. You figure. Actually there are two things at work here; the microbes come back via the air and water awfully fast; and two, you need to add an awful lot to due any good. The above 2% on a acre-furrow-slice (6 inch deep acre) is 20 tons, or about 1000 pounds of soil would need to be added back after sterilization/1000 sq. ft.

G.Y. Yuen discussed the phylloplane environment (the micro-environment of the leaves of turf). He noted than the reasons it is difficult to obtain disease control with biological agents is that there is typically insufficient colonization of the leaf surfaces by the applied agent. Secondly, UV-B light reduces the population of the agents applied. Joe Vargas then noted that one must apply biocontrol bacteria close to night fall so as to avoid the drying and UV-B light. That way you will at least obtain one nights work out of your biological agent.

We had an evening session that discussed where all the research money has gone, where it came from and where it is going in the future.

On the morning of the 8th we had two turf sessions at the same time so I heard several papers in one before scooting over to the other session. I think I went to the wrong session first - got no useful notes. Even the second session only left me with the following: **Ethephon (Proxy)** sprayed on at 2821 ppm reduces leaf blade length significantly in the seven grasses looked at (bermuda, Kentucky blue., crp. bent., fine fescue, zoysia, perennial rye., and tall fescue). It reduced sheath length in fine fescue and Kentucky while increasing it in the others. It increased internode length in fine fescues and Kentucky. It did not result in significant dry weights between controls and treated plants.

Next I listened to Dr. Mike Richardson, U. of Ark. talk about how he tried to improve **cold hardiness** of **Tifway bermudagrass** by the use of **Primo** and late season nitrogen. Late nitrogen

application and Primo combined to give faster/better Spring greenup. Primo gave no difference in rhizomes or crown density but late nitrogen did increase rhizome and crown development the first year but not the second. Primo did increase winter hardiness some. There was no interaction between late season nitrogen and Primo as to cold hardiness.

Dr. Donanvon Taylor, **U. of Wis. at** River Falls discussed his research on the use of **late Fall topdressing on golf greens**. Of three years data the spring of 2000 was the most dramatic. Dark topdressing materials = warmer temperatures at the surface and = better color for 3 to 6 weeks in the Spring. There was some evidence(overlapped strips) that topdressing deeper than 1/8 inch might result in damage.

One talk of great interest to me was by Kevin Frank of Michigan State U. on **The effects of a Variable depth root zone mix on soil moisture retention**. The hypothesis of the research was that an 8 inch depth of soil on the high spots (knolls) and a 16 inch depth on the low spots would result in more uniform moisture at the surface of a USGA putting green. It works! Now think of how you have to exaggerate the gravel layer to obtain this effect. The old scheme of having the gravel blanket match the contours of the final green goes out the window. But, so do the high dry spots or, the front of greens that are constantly damp. We should see a lot more on this important finding over the next 10 years.

We may be seeing more aluminum bonded phosphorus for use in sand based greens as it reduces leaching of phosphorus. Not that leaching of phosphorus is a large problem until we start talking about keeping phosphorus in our adjacent waters to 1 ppm or less. This I believe is the EPA's latest goal.

I ended up the Conference by staying to hear plant breeders present their papers. Now they are in a different world from you and I. They for one live in a very math oriented world. There were two talks on milking more information from plot data by improved statistical/mathimatical methods that are now possible with large computer systems. Essentially what they are doing is adjusting for small differences in the soils underneath large experimental plot areas.

Then another researcher is talking about inserting a gene from spinach into Kentucky bluegrass so as to increase salt and drought tolerance. While a third researcher was discussing transgenic gene flow in creeping bentgrass. That is the ability of the genes in the pollen to be blown from the research field and pass on the characteristics, of say Roundup resistance, to other related species. It appears that this can happen at distances of 3000 feet or more. It is quite possible in Washington or Oregon that there are other related species a 1/2 mile away that are thus going to be effected.

In looking at the presence of off-type bermudagrasses in the hybrids (the Tif's and new mini-dwarfs) D.W. Davis reported the dinitroaniline class preemerges may be responsible when used in the sod fields. The dinitroanilines are: Treflan, Balan, Surflan, and Pendimethalin.

END