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The 1988 WGCSA Education Program—

"The Year of the USGA"

By Michael Semler

The Education Committee of the WGCSA has set the speaker program for the 1988 monthly meetings with a theme of the "Year of the USGA". Joining us will be USGA Agronomists Stan Zontek and James Latham, and the USGA Green Section National Director, Bill Bengeyfield. They will share their expertise on the subjects of golf turf management and current USGA research projects.

Since its inception in November of 1920, the USGA has been the only non-partial, scientific agency working full-time in turfgrass science as it relates to golf turf management. Now, with members of Wisconsin's turf management community making an all out effort for its own research facility, named appropriately, the *O.J. Noer Center for Turfgrass Research*, it will be very timely to hear from the USGA. It has been a leader in golf turf research and in the education of American golfers on the necessity for research and the dire need for future planning and funding.

Stan Zontek, the Green Section Director of the Mid-Atlantic Region, will bring us up to date in April on what is new and innovative from the East Coast.

In September, our own Great Lakes Regional Director, James Latham, will give us a 1988 season wrap up and report card on what he has seen in our own area of the country.

A very special guest has cordially accepted an invitation to address the WGCSA May meeting. He is Bill Bengeyfield, and in addition to being National Director of the USGA Green Section, he is also Editor of the USGA *Green Section Record*, and Chairman of the USGA Research Committee. He will address us on the need for support for the USGA turfgrass research program and will update us on its primary goals and current results.

Mr. Bengeyfield graduated from Cornell University's College of Agriculture in 1949 with a Bachelor of Science degree and joined the New York State Extension Service in that year. In 1953, he joined the USGA and was appointed Western Director the following year. He was chosen National Director of the USGA Green Section in 1982 and serves in that position to date.

It is an honor for the WGCSA to have representatives of the USGA Green Section speak and share 68 years of knowledge and service with us.

In 1920, E.J. Marshall, a Green Committee Chairman at the Inverness Club in Toledo, Ohio, had the idea to form a cooperation between the USGA and the United States Department of Agriculture to work together on turfgrass problems. This cooperation led to the formation of the Green Section.

Shortly thereafter, in 1921, the *Bulletin* of the Green Section, one of the parent publications of the current *Green Section Record*, was formed. It remains today one of the best publications for disseminating turf research information and providing quality maintenance procedures to subscribing clubs.

In 1932, Dr. John Monteith, the Green Section Director, published "Turf Diseases and Their Control". He developed the first effective fungicides for turfgrass use. Prior to that, extensive losses of turfgrass to diseases was quite common.

From 1920 to 1953, the Green Section primarily conducted research, first at Arlington, Virginia and then at Beltsville, Maryland. This research made up much of the published material. Invitations were made to "Greenkeepers", Club Officials and Golf Professionals to the National Field Days. Research results and exhibits were discussed and explained to benefit those in attendance. Golf professionals were even allowed to practice on new varieties of bentgrass, U-3 bermudagrass, Merion bluegrass and other experimental grasses.

In 1953, however, the Green Section took a monumental direction shift by offering the USGA Green Section Regional Turf Service. This service provided direct on-site visits by the Green Section staff who would advise the host clubs on their turf problems and solutions. Now, with this directional change, it would continue to provide financial support and directional guidance for research, but the research would be done by others. The Green Section's specialized staff of trained agronomists would disseminate these results directly to the golf courses.

As originally established, the Turf Advisory Service had two goals: 1) Intimate, specialized consultation service on a regular and permanent basis, located to best serve the convenience of the subscribing clubs; and, 2) maintenance and coordination of turf experimentation on a broad scale to bring the greatest possible return to the member clubs.

Since World War II, the Green Section worked toward decentralizing

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research activities from its headquarters to different regions where peculiar problems may occur. This "direction change" was merely a continuation of decentralization to give more emphasis on direct service to member clubs.

Today, the Green Section maintains six regional offices, as well as its national headquarters based at Golf House in Far Hills, New Jersey. Regional directors and staff agronomists make approximately 1,300 annual visits to subscribing clubs. Its sole mission is, and always has been, to distribute the best possible information to help in the pursuit of the best possible golf turf.

The USGA Green Section remains active in support of turfgrass research with its proposed multimillion dollar, ten year research program. It will be overseen by the Green Sections Turfgrass Research Committee. This committee is comprised of some of the nation's leading turfgrass experts. Bill Bengeyfield is chairman of this committee.

The primary purpose of the program is to develop minimal maintenance turfgrasses. Emphasis will be placed on salt tolerant, water conserving, heat and cold tolerant, disease and insect resistant grasses with low nutritional needs.

The ultimate goal is a wear resistant turf with the minimal maintenance qualities that provides excellent playing surfaces.

The Research Advisory Committee serves without compensation at the pleasure of the USGA Executive Committee. It will coordinate and watch over the entire project to insure that these essential goals and proper progress are being met for the future of excellent golf turf.

It is easy to see that for 68 years, the USGA and its Green Section have provided for some of the best turf research and the most efficient dissemination of that information to Golf Clubs around the nation. How appropriate then, that the WGCSA can help support their goals and share in this celebration of excellence in the "Year of the USGA".

POST EMERGENCE BROADLEAF WEED CONTROL IN TURFGRASS

By Dr. Robert Newman
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Before you do anything else, please read the following sentence which appears on almost all herbicide labels. "It is a violation of Federal Law to use any herbicide in a manner inconsistent with its labeling." Having read and vowed to observe the laws, we can proceed.

Most broadleaf weed herbicides are applied with a sprayer. Herbicide drift is a very common and serious problem when herbicides are sprayer-applied when there is any appreciable wind. The question of how much wind is too much isn't easy to determine. Spray drift due to wind is influenced by both wind speed and wind direction and several other factors. Obviously don't spray when there are a lot of sensitive plants downwind from the area you wish to spray. Sprayer pressure affects spray drift. At higher pressures more very fine droplets are formed at the nozzle tip leading to more drift. Nozzle tip size plays a role in drift. In general, the smaller the nozzle tip the more fine droplets and the greater potential for drift. Boom or nozzle height affects drift. The higher the boom or nozzle the greater the potential for drift. Flat fan nozzle tips are available to spray at a 65°, 80° or 110° angle. When 65° spray angle tips are spaced every 20 inches on a boom, the suggested boom height is 22"-24" above the ground or above the turf-weed canopy. At 20 inch nozzle spacing on a boom, and using 110° spray angle tips, the suggested boom height is only 10"-12".

Spray angle (of nozzles)	Spray height 20" spacing of nozzles on boom
65°	22-24"
80°	17-19"
110°	10-12"

Various thickeners are available to add to the sprayer tank. Thickeners reduce the number of very small sized spray droplets hence reduce the potential for drift.

A second way herbicide can move out of the target area is by vapor drift. Volatile ester formulations may evaporate at high temperatures and the vapor can drift downwind. Ester formulations of herbicides are volatile and there are lots of them in the market place. You can purchase 2,4-D, Trimec, Weedone DPC, Turflon D and others in either the ester or amine form. Ester formulations work better because they are oil soluble and penetrate the waxy leaf cuticles better than water soluble amines. Esters can be used in spring or fall when temperatures don't reach 80°F but should never be used in summer when it is hot or may get hot within a day or 2 after application. There are low volatile and high volatile esters available. Both are volatile and too dangerous to use in the heat of summer.

I think we can safely say that there is a certain amount of risk associated with the application of post emergence herbicides that are just as effective in causing injury to grapes, tomatoes and petunias as to dandelions, plantains and other common broadleaf turf weeds. It is up to us to reduce the risk factor as much as possible. Here are a few suggestions.

1. Spray when it isn't windy.
2. Use low pressure wide angle nozzle tips on boom sprayers.
3. Keep the sprayer pressure low.
4. Product labels often suggest a range of water per acre - perhaps 15 to 40. Use more than the minimum amount of label-suggested water.
5. Consider using thickeners to reduce fine droplets.
6. Keep the boom low by using wide (110°) angle nozzles.
7. Never use ester formulations when ever there is even a remote possibility of temperatures in the 85° or above range.
8. Apply herbicides for broadleaf weed control in early May before the last spring frosts and before people transplant herbicide sensative bedding plants in their gardens.
9. Or apply the herbicides in fall around the time of the first killing frost that will kill frost intolerant flowers and vegetables.
10. If you must spray next to or very near shrubs, there is less potential for injury in fall when the conifers have stopped growing and the broadleafed shrubs are about to drop their leaves compared to June when growth is very active.

Herbicide application failures result in the need to reapply which increases the "risk" factor. To reduce the potential for herbicide failure:

1. Identify the weeds you intend to eliminate so that you can choose