he word “sabbatic” is derived from the Greek term sabbath, meaning a time of rest. A sabbatic leave is a privilege college professors are entitled to to refresh, refocus, and to work on projects they just wouldn’t be able to accomplish in the course of their normal activities.

Having recently returned from a one year sabbatic leave, I have been asked by many curious people how I enjoyed my “time off”, and to what exotic places did I travel. Well, I didn’t spend the year at home watching TV game shows and eating bon-bons. I traveled to places like Tomball, Texas, Olathe, Kansas, and some town in western Ohio (I don’t recall the name of the town, but it was flat, hot, and was surrounded by nothing but corn fields). I did have a great year, though, and would like to share with you a synopsis of what I worked on, and how the turfgrass industry may be affected.

Laboratory Standards

For over thirty years the USGA specifications have been the most widely accepted and used greens construction specifications in the industry. Since their inception, they have relied on laboratory test results to determine if a rootzone is acceptable or not. The original specs included a brief and rather incomplete writeup of the test procedures.

In the past few years several new labs have begun to offer physical testing services. With no industry standards, a problem of quality control was obvious. It was common for superintendents to send identical samples to different labs, only to receive very different results. When you consider that the USGA Specifications are based on these laboratory results, you can see why there might be a serious problem.

Having 14 years experience informally testing rootzone mixes, I approached Jim Snow, national director of the USGA Greens Section about writing standard test procedures for the industry to follow. With USGA support, I was able to take a leave for a full year to work on the lab standards, and to work on a revision of their specifications.

I spent the first couple of months visiting eight labs around the country to assess their current operating procedures, and to discuss potential changes with the lab directors. After my visits, it was safe to say that no two labs were performing the tests the same way. In fact, my visits uncovered serious shortcomings in a few of the labs, from the use of inappropriate equipment to math errors. One lab had been sending out erroneous results for years. Only three of the eight labs had a trained agronomist on staff.

To assess the seriousness of this problem, I split a uniformly mixed rootzone sample, and sent a subsample to all the labs. The variation in the results I received back only reconfirmed the need for standard test methods.

Test methods published by the American Society of Agronomy and the American Society of Testing and Materials (ASTM) were then adapted for putting green and sports turf rootzone mixes. The procedures provide a cookbook approach to the testing process, and include all mathematical formulas. While these standards will no doubt improve the operating procedures in most labs, please be advised that the competence in the lab personnel interpreting the results will likely remain as it was before.

These procedures have since gone through a critical review by several soil scientists, and are now being submitted to ASTM as accepted and published standard test methods. Most labs will be adopting these procedures soon. While there are no guarantees, the results coming out of the labs should be much more consistent than in the past. Also, a quality assessment program to monitor lab performance is being considered.

USGA Specifications

The USGA Specifications for Putting Green Construction have gone through two revisions since the original, the latest in 1989. For many reasons, the 1989 specs were very controversial and a source of much criticism for the USGA Green Section. Jim Snow asked that I 1) critically review the specs and make recommendations for revisions; 2) provide a scientific rationale for the new specifications, and 3) identify areas of research.

For several months I was a student again, studying the scientific literature in soil modification, soil physics, and geotechnical and drainage engineering.

After I made my recommendations for changes to the USGA, the proposed specs went through the most rigorous and comprehensive review ever.

Continued on page 4
Tall Fescues
continued from cover

only influence the frequency of mowing, but also
the cost of clipping disposal where clippings are
removed.

Overseeding Programs

Continuous overseeding is necessary to main-
tain thick stands of tall fescue on athletic fields, as
is the case with other bunch type grasses. Main-
taining turf density in tall fescue stands appears to
be especially important. Failure to do so will
cause the grass to develop clumps of very coarse
texture.

Tall fescue is not very compatible with other
cool season grasses. Mixtures of 90% tall fescue
and 10% bluegrass can be used successfully if the
especially well suited for overseeding, and much
better than tall fescue for this purpose. Perennial
ryegrass germinates very quickly, even in cool
soils, has good wear tolerance, excellent close
mowing tolerance, and is very attractive.

In summary, Kentucky bluegrass, perennial
ryegrass, and the fine leaf fescues have for years
performed well in New York State in most turf-
grass situations. While there will be some applica-
tions for tall fescue in New York, it is certainly not
the wonder grass some have touted it to be. Be
careful in deciding where tall fescue fits into your
establishment plans or maintenance program.

NORMAN W. HUMMEL JR.
DEPT. OF FLORICULTURE AND ORNAMENTAL HORTICULTURE

Table 1. Comparison of Maintenance Requirements of Cool Season Grasses.

<table>
<thead>
<tr>
<th>Grass Species</th>
<th>Irrigation Needs</th>
<th>Fertility Needs</th>
<th>Mowing Frequency</th>
<th>Pest Problems</th>
<th>Adaptation to New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall fescue</td>
<td>low</td>
<td>low</td>
<td>high</td>
<td>few</td>
<td>fair</td>
</tr>
<tr>
<td>K. Bluegrass</td>
<td>med</td>
<td>low-med</td>
<td>med</td>
<td>some</td>
<td>excellent</td>
</tr>
<tr>
<td>Per. Ryegrass</td>
<td>med</td>
<td>med</td>
<td>high</td>
<td>some</td>
<td>very good</td>
</tr>
<tr>
<td>Fine fescue</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>some</td>
<td>excellent</td>
</tr>
</tbody>
</table>

Rest
continued from page 5

The new specifications are more flexible than
the 1989 version in areas I thought there could, and
should be more flexibility. The changes should
allow perfectly acceptable materials to be used;
materials that would not have met the overly
restrictive specifications of the past. At the same
time, the specifications’ limits are very clearly
defined. In other words, there will be no doubt if
a material does or does not meet specification.

After I made my recommendations for
changes to the USGA, the proposed specs went
through the most rigorous and comprehensive
review ever. Scientists, architects, and others from
around the world were invited to review the specs.
Where appropriate, their suggestions were incor-
porated into the specifications giving them a strong
foundation as well as international credibility.

A complete review of the literature was writ-
ten that provides the scientific rationale for the
pending specifications. These will be published
by the USGA Green Section early in 1993.

My year “off” was a great experience for me
in that it gave me the time to do a thorough job on
a sorely needed project. It was an opportunity to
meet many new people in a segment of the indus-
try that most of us don’t normally have contact
with. I had a chance to travel extensively, and to
visit some very fine golf courses. It was a pleasure
to work with the USGA Green Section staff; a very
dedicated and experienced group of individuals.

Finally, it was very gratifying to feel that my
efforts have contributed to the turfgrass industry
in some way, and not solely within the borders of
New York State. It was a great year indeed!

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While there will be some applications for tall fescue in New York, it is certainly not the wonder grass some have touted it to be.