

SPORTS AND COMMERCIAL TURF MANAGEMENT PROGRAM REPORT
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Program Update

Twenty-one incoming students helped maintain total program enrollment at nearly 40 students. Here are the program's student numbers since I arrived here in 1993.

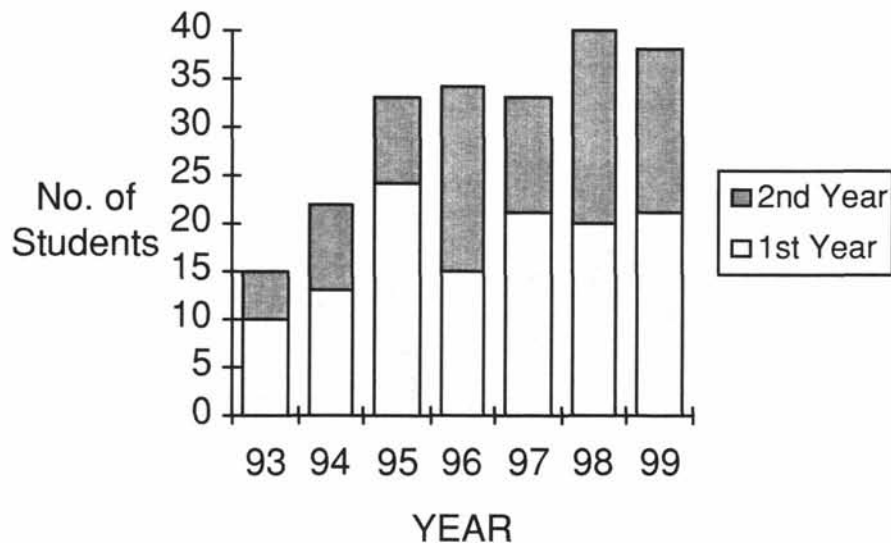


Fig 1. Fall-semester enrollment for first and second year Sports and Commercial Turf Management students.

Job offers upon graduation continue to be plentiful, especially in lawn/ landscape maintenance. A complete run-down of graduate placement appeared in the Fall 99 *News Notes*.

Research Update

With no research appointment and no external funding, I still find time and resources to conduct field research that may be useful to the sports and commercial turf segments of our industry. Two studies have been completed and will be presented by me during subsequent sessions of this conference. The first will be part on Wednesday at 9:50 A. M. as part of the Professional Grounds Management session. The presentation is entitled "How to Enhance Spring Green-up with Mowing". The other is entitled "Four-Year Nitrogen-Protocol Study" and will occur on Thursday at 8:30 A. M. during the Professional Lawn Care and Grounds Management session. My other two research projects are "works-in-progress" and are capsulated below.

Kentucky Bluegrass Height-of-Cut Study

This experiment has Kentucky bluegrass growing at 8 different mowing heights at half-inch increments from 1.5 to 5 inches. All the mowings are made according to the "one-third rule" and Figure 2 shows the mean mowing frequency and the shortest interval between mowings averaged over several

months during the last two years. The plot area received 0.5-inch irrigation twice weekly and was fertilized at a low rate of 2 lb. N per 1,000 sq. ft. For the next two years we'll maintain these plots under a medium rate of 4 lb. N per 1,000 sq. ft. per year. After that we'll go to a high rate of 6 lb. N per 1,000-sq. ft. annually.

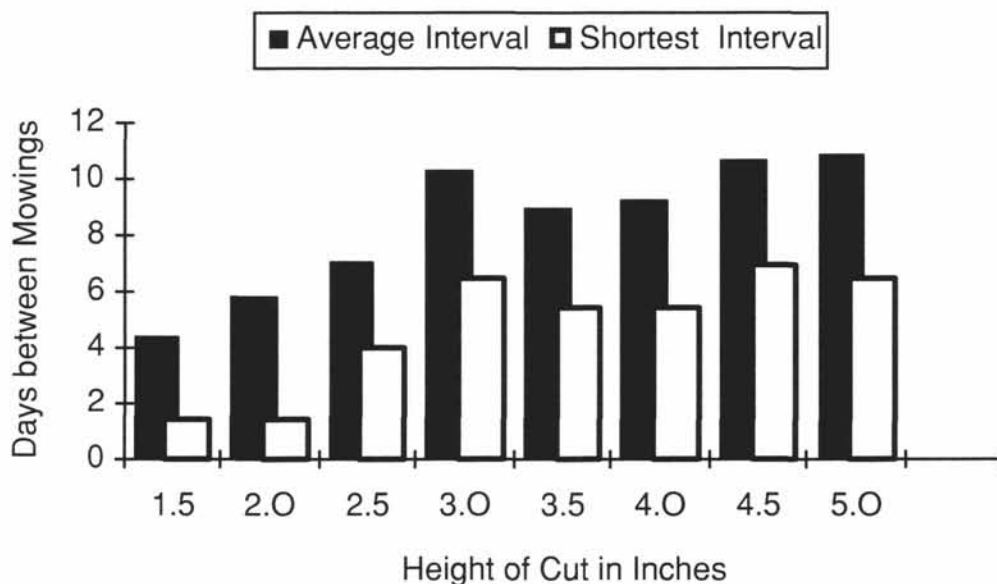


Fig. 2. Average and shortest intervals between mowings of Kentucky bluegrass mowed at 8 heights of cut between mid May and mid October of 1998 and 1999.

During last year's Turf Producers International Summer Conference, we asked the field day participants the following question:

"In your opinion is the mowing height of each plot too short, too tall, or OK for a Kentucky bluegrass lawn?"

The actual mowing heights and replication numbers (3) were not revealed. The sod industry's preferences are shown in Figure 3.

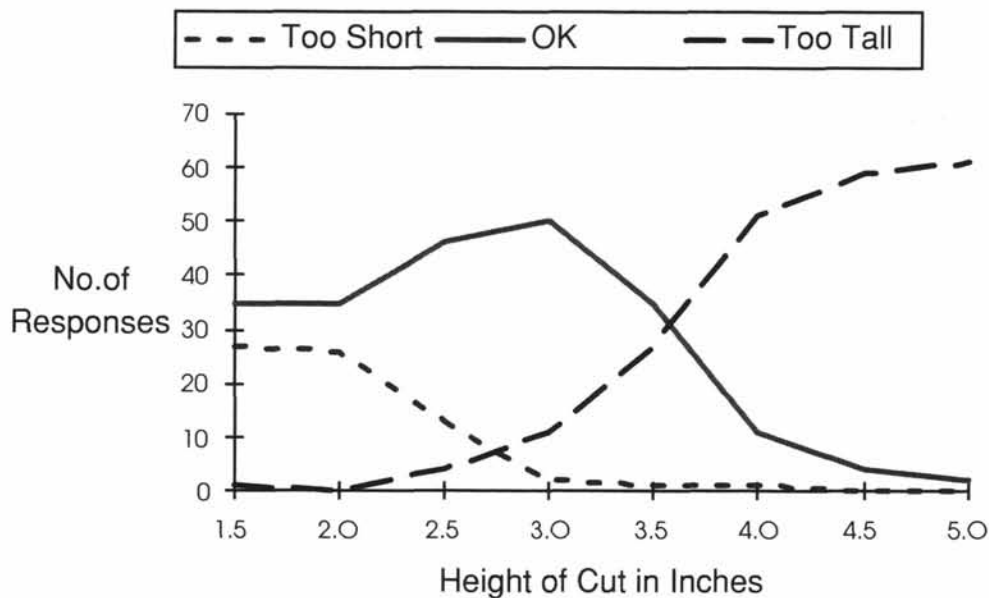


Fig. 3. Lawn height-of-cut survey responses of 63 attendees at 1999 Turf Producers International Field Day.

Irrigation-Fertility-Species (IFS) Study (with Thom Nikolai and Paul Rieke)

We have just completed the first full year of a study looking at the interaction of 3 irrigation regimes, three lawn species, and nine fertility regimens. The main plots are the irrigation regimes, unirrigated, watered once a week at night with 0.7 inch, and watered daily at 2 P.M. with 0.1 inch. Irrigation months are May through September. The subplot species are Kentucky bluegrass, perennial ryegrass, and turf-type tall fescue. The sub subplots are nitrogen additions with varied amounts and timings of applications. These nine treatments are shown below:

Table 1. Amounts and timing of fertility treatments within the IFS study underway at the Hancock Turfgrass Research Center.

Date	Treatment Numbers								
	1	2	3	4	5	6	7	8	9
April 7 (R-1)	1		1		1/2	1		1	1/2
May 19 (R-2)			1	1	1	1	1		
June 30 (R-3)			1/2	1/2	1/2	1	1		
Aug 11 (R-4)						1	1		
Sept 7	1	1	1	1	1			1	1/2
Sept 22 (R-5)						1	1		
Nov 3 (R-6)		1		1	1		1		1
Lb. N/M/yr.	2	2	3.5	3.5	4	5	5	2	2
Applications/yr.	2	2	4	4	5	5	6	2	3

R 1-6 are rounds of application common to the Michigan lawn care industry.

Fertility treatments were initiated last fall, and the perennial ryegrass plots maintained greener color throughout the winter and early spring. Furthermore, fall applied nitrogen- enhanced greenup regardless of species or irrigation regime. During a June drought, we detected significant differences among treatments with regards to surface temperatures. The daily watered plots that received the most nitrogen were the coolest. In the unirrigated plots the tall fescue looked better than the Kentucky bluegrass, which in turn out performed the perennial ryegrass. These differences diminished with heavy rains around the end of June.

Visual quality ratings have been higher where nitrogen has been applied with no differences between the daily and weekly watered plots with both regimes fairing much better than the unirrigated plots. So far none of the results have been surprising, but we hope that this long-term study will help settle the longstanding debate regarding proper watering of lawn height cool-season turfgrasses and whether or not the amount and timings of nitrogen fertilizations make a difference in these findings. As future funding allows, additional measurements of shoot density, root mass, clipping yield and pest activity will be taken from the 243 plots.