

The Sports Turf Industry (Part I)

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The State of Sports Turf Management

On the eve of the 21st Century, sports turf management has evolved as a highly visible profession with great growth potential. This first of two articles is based on the results of a recent survey of sports turf managers who were asked to complete a 26 item questionnaire about the industry. The survey was selective in that it was mailed only to sports turf managers who are STMA members.

During the decade of the 1990's, the number of new sports fields, be they baseball, football, soccer, or softball, has increased dramatically. Perhaps the greatest and most visible increase, has been in multi-million dollar municipal sports complexes where citizens from age 5 and up can enjoy playing their favorite sport(s). For example, here in Alabama, the number of sports fields is estimated to be 7,650, which is one for every 500 citizens, based on a population of 4,000,000. With the growth in the number of facilities, there should be a growing need and appreciation for qualified sports turf managers who can provide better and safer playing surfaces for these fields.

THE SPORTS TURF STAFF

Among managers surveyed, the average number of years in the profession was 13. The range in service varies from 1 to 24 years. The typical manager had been in his or her current position 7.5 years, while 38% had more than 10 years tenure in their present position. These findings indicate strong job stability for the profession.

As shown in Table 1, the number of staff members involved in sports turf management at a given facility varied with the sports activity and whether it was at the municipal or professional level. NFL and MLB facilities have the smallest staffs, usually three or less permanent staff members. Whereas universities and municipal park systems have an average of 7 to 11 on their turf maintenance staff. The number of workers fluctuates with the season, increasing in

Table I. Average number of turf maintenance staff members employed at various athletic facilities

Type of Facility	Peak Season	Off Season
Major League Baseball	8	3
National Football League	3	2
University or college	11	7
Municipal or public	9	4
Mean	8	4
Range	(1-35)	(1-35)

the summer and decreasing in the winter. However, there is a growing trend toward maintaining a larger permanent staff by providing alternate job activities during periods of low field use. This is a sound personnel management strategy because it ensures having well trained employees who take more pride in their work and the facility.

Averages can be misleading. For example, turf maintenance staffs for professional stadiums have little variance in staff employed with more than half having a staff of less than 3. Conversely, turf maintenance staffs at universities ranged from 2 to 35 year-round employees.

At Southern latitudes where climates permit outdoor sports activities on a year-round basis, there is often no seasonal fluctuation in the number of staff as there is no "off-season". This was the case for universities at Anaheim, CA (35)*, Auburn, AL (10), and Miami, FL (5).

*Numbers in parenthesis = number on turf maintenance staff

NUMBER OF FIELD EVENTS PER FACILITY

Table II. Number of sports fields maintained per manager

Number	Percentage of respondents
1 field	20%
2-3 fields	17%
5-10 fields	42%
11-20 fields	16%
> 20 fields	5%

Range in number of fields managed - 1 to 100

The number of fields managed by each responding manager varied from one (1) to 100 with an average of 9 fields. The distribution is shown in Table II.

The number of events per sports complex reported ranged from a low of 8 where only a single football field was involved to >3500 events where multiple use complexes involved youth and adults in all sports. As shown in figure 1 (see page 4), softball fields had the most use and football fields the least. The range in events reported for each major sport are shown in parenthesis. Other sports and events on fields not shown included band practices, concerts,

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drill teams, religious crusades, lacrosse, field hockey and intra-mural activities.

Figure 1. Event per facility for designated sport

	Sport	Mean	Range Reported
Most	Softball	151	30-2000
↑	Soccer	125	30-1000
↓	Baseball	112	30-1000
Least	Football	62	6-500

Because respondents did not always indicate field numbers by sport it was not possible to determine events per field. What these data clearly show is that municipal and university fields provide recreational turf for large numbers of participants, subjecting the fields to high levels of traffic. This gives credence to sports managers identifying soil compaction as a major problem.

ROOTZONES

Figure 2. Types of sports field rootzones

Type	% of field type in each region	
	Cool season (Bluegrass)	Warm season (Bermudagrass)
Native Soil	81%	82%
Sand Based	19%	18%

Interestingly, the survey showed an equal percentage of fields having sand based rootzones in the Northern and Southern Regions of the USA, about 20%. However, given a choice, sports managers expressed a 3 to 1 preference for sand based fields. The major reasons given for preferring sand based fields were greater resistance to compaction and better playability under wet conditions. Greater soil strength was cited as the most important advantage of native soil fields. Loss of nutrients to leaching was the major problem encountered with sand based fields.

AGRONOMIC PRACTICES

A. HOW SPORTS TURF MANAGERS MOW

The survey shows that STMA members are to be commended for their attention to good mowing practices. Figure 3. shows that more athletic fields are mowed daily than at any other mowing frequency.

Figure 3. Frequency of mowing sports fields

Interval	Percentage of Managers
Daily	40%
4x weekly	9%
3x weekly	30%
2x weekly	21%



Frequent mowing is essential for healthy, dense turf because it reduces scalping, disease incidence, the need for sweeping and it improves field appearance (as pictured above).

Probably because of the rapid growth of bermudagrass and its susceptibility to scalping, a higher percent of turf managers in the southeast reported daily mowing of sports fields than did managers from other regions.

B. FERTILIZATION AND SOIL TESTING OF SPORTS FIELDS

All survey respondents use soil testing as a common part of their turf nutrition program. Figure 4 shows the survey results on frequency of soil sampling.

Figure 4. Frequency of soil testing on sports fields

Interval of testing	Percentage for each frequency interval reported
12x annually	2%
6x annually	10%
2x annually	22%
1x annually	42%
Bi-annually	22%
Tri-annually	2%

More frequent soil testing was reported by managers who have sand-based fields.

The use of tissue testing is a standard practice by 44% of survey respondents.

Survey results also showed that all sports turf managers use more than one type of nitrogen fertilizer and that they use one or more slow release synthetic nitrogen sources; see Figures 5 and 6 on the next page.

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Figure 5. Types of fertilizers applied to sports fields

Type	Percentage of respondents
Soluble nitrogen	78%*
Slow release synthetic N	73%
Speciality formulations	60%
Natural organics	50%

*all managers use more than one type.

Figure 6. Percentage of turf managers using various

Slow release synthetic N-sources

IBDU-----	27%*
Polyon-----	33%
SCU-----	66%
UF-----	30%

*Some managers use more than one of the slow release nitrogen sources listed

Because of its acceptable performance at a lower cost per unit of nitrogen, sulfur coated urea (SCU) was the most widely used slow release source used by survey respondents.



Off-field irrigation gun in use

C. IRRIGATION SYSTEMS USED BY SPORTS TURF MANAGERS

The survey data showed that 80% of sports fields are irrigated with "on field" pop up sprinklers. The remainder of the fields are irrigated with off-field water cannons (11%);

on-field quick coupler sprinklers (7%); and by traveling or towed impact sprinklers (2%).

Part II of this series will present survey results on what's ahead for sports turf management in the 21st century - specific topics will include turf cultivars, edu-

cation and training, factors motivating turf managers, where and from whom they seek advice, and a forecast of job opportunities in sports turf management.



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