

---

# Mowing Management, Maintaining Your Turf at the Height of Quality

---

\*by Jim Hermann, CSFM  
hq@sfmanj.org

---

"Don't ask me, I just mow the lawn". Although thought of by many as a menial task best left to persons whose desire for professional accomplishment falls short of those who have walked the halls of our fine institutions of higher education, proper mowing management is an art form imbedded in science yet perfected through experience and wisdom.

It's easy, right, a no brainer. Just follow a few simple rules and you've got a well manicured, properly maintained complex.

The following is a mowing specification I received for maintenance of a commercial office complex:

1. Lawn shall be maintained at a mowed height of two (2) inches
2. Mowing shall be accomplished on a once per week schedule
3. No more than 1/3 the leaf blade shall be removed at any one time.

What's wrong with this picture? You can't specify the height of cut, the mowing frequency and the portion of cut. You can specify any two but not all three

Knowing that the person who wrote these specs was a bean counter sitting in a cubical in Kansas and being fairly certain no one would be walking the lawn with a ruler, I bid the job for weekly mowing. After being awarded the contract, I threw away the specs and mowed the lawn at the height necessary to maintain a quality appearance and a once per week mowing frequency.

Please understand I am in no way condoning disregard for specifications but I do believe the contracting party, as always has a responsibility to provide potential service providers with effective, doable specifications.

The preceding specifications are just one example of the simplistic thinking and lack of understanding maintained by many people associated with proper mowing management.

Mowing management remains the most important aspect in developing the level of quality achieved on your athletic turf. Improper mowing will diminish the

results of an otherwise effective overall management strategy.

Here's much of what science has to say about proper mowing technique:

1. Never remove more than 1/3 the leaf blade at any one time
2. Always mow when the grass is dry
3. Always mow with sharp mower blades

Here's an approach to applying these 3 little rules:

Never remove more than 1/3 the leaf blade at any one time. Most cool season turf prefers a mowing height between 1.5" and 3". Perennial rye can be maintained comfortably on the low side of this range. Blue grass falls in the middle and tall fescue prefers to be maintained on the higher side of this range. That's only half the equation. What are your capabilities? How often can you mow? Maintaining turf at 1.5" under average fertility conditions would require mowing every other day in order to even come close to following the 1/3 rule. You would only be removing 1/2" or so per cut. If you attempt to maintain turf at a lower height of cut than would be dictated by the frequency, you only serve to stress the turf by removing too much green leaf and also cause an excessive buildup of clippings. Fertilizing to improve the quality and density of turf, which is stressed due to improper mowing management, only compounds the problem. Mowing must come first.

In my opinion, in order to maintain an acceptable degree of turf density and playability, recreational athletic turf must be mowed twice per week or once every 3 to 4 days. In my experience this mowing schedule has limited turf to a mowed height of approximately 2.5". Maintaining a mowed height much higher than 2.5", the leagues become upset and the turf loses density. At a lower height I accumulate clipping. A couple options available in dealing with clipping accumulation caused by improper mowing frequency are clipping removal and double cutting or mowing twice on the same day. In either case

you are attempting to put a band-aid on the most limiting long-term problem you are causing which is turf stress. This turf stress is due to removal of too much green leaf. By collecting and removing clippings you are adding insult to injury by eliminating the recycling of nutrients held within the clippings.

Always mow when the grass is dry. Yea right. Sounds good from where I sit. Realistically, always mowing when the grass is dry can't be done with any degree of consistency. When confronted with this dilemma and given the option, I try to mow common ground when it's wet and attempt to allow the playing areas to dry out. If I have to mow playing areas when they are wet I try to alternate areas so that the same areas are not always mowed wet. Every area takes its turn.

The following comments are in reference to rotary mowers although much of the same can be said for reel type mowers.

Always mow with sharp mower blades. Again, this would seem a logical observation. The sharper you maintain your mower blades, the better the quality of cut. Dull mower blades tend to rip and shred the grass blade as apposed to cutting it clean. In addition to increasing the potential for fungus in damp conditions, shredding of the blade tips also becomes a consideration as the weather becomes more hot and dry into the summer months. Under certain conditions turf mowed with dull blades tends to acquire a whitish cast or hay like appearance due to desiccation and drying out of the shredded blade tips. Transpiration or loss of moisture through the leaf is increased as the exposed surface area of leaf tissue is increased due to shredding. The clean cut provided by sharp mower blades reduces this moisture loss thus aiding in drought tolerance of the turf.

Along with the agronomic benefits of maintaining sharp mower blades, a faster mowing speed may be maintained while still providing a quality cut.

A grinder designed for the task of sharpening blades is highly recommended as apposed to a typical bench grinder or hand held grinder. Blade sharpening grinders typically have a table designed to help stabilize the blade during the sharpening process thus providing a truer grind and more consistent bevel. They also have a larger diameter grinding wheel with a courser texture that rotates at a slower RPM when compared to a typical bench

or hand held grinder. The larger diameter wheel provides a more appropriate bevel to the blade. The slower rotation speed and courser textured wheel help to maintain blade temper by minimizing heat and as such minimize blade wear. In addition to maintaining a sharp edge, blades should periodically be checked for balance and trueness. There is nothing more obvious on an otherwise well manicure field than either dull blades or a bent blade. I know of businesses that sharpen blades every day. I would recommend sharpening every sixteen to twenty hours of use. Under no circumstances would I allow blade sharpening to go more than once per week under normal use.

In addition to blade quality the mower deck should be cleaned. Accumulation of clippings under the mower deck interferes with proper airflow, clipping discharge and quality of cut.

In order to optimize efficiency when mowing, I typically choose to maintain common ground at a higher height of cut thus allowing for a once per week mowing frequency while mowing the playing areas lower and more frequently. This only works if the mowing height of your machine can be adjusted efficiently without too much down time. On one site in particular due to budgetary restraints I was mowing the entire complex on a 4 – 5 day schedule in an attempt to keep the playing areas under control. At this mowing frequency I was unable to maintain the mowed height of the playing areas at 2.5" without excessive clipping accumulation. For this reason I started mowing the playing areas on a 3 – 4 day schedule at 2.5" and extended the frequency on the common ground to once per week (every other mowing of playing areas) while increasing the mowed height to 3.5". I managed to maintain the same number of man-hours per month, keep costs within the budget and increase the quality of the playing areas. The common areas showed little change in quality. If anything the common ground improved in quality and appearance due to reduced turf stress and less clipping buildup.

I believe turf maintained at a higher height of cut will maintain better density and quality as long as the 1/3 rule is followed, than would turf maintained at a lower height of cut while not following the 1/3 rule.

For me, a ¼" mowing height adjustment dictated by varying environmental conditions in combination with slight modifications to the mowing schedule have proven to be the greatest asset in maintaining a quality athletic turf. In order for this strategy to work mowing must be a priority in your work schedule.

If you are like most and maintain your athletic fields within a five-day workweek, you are limited in scheduling options if you intend to mow on a 3 or 4-day schedule. First, save Wednesday as a rain day. Monday & Tuesday, Thursday & Friday are mowing days. If you mow on Monday, you can either mow Thursday or Friday. If you mow Tuesday, you are limited to your follow up mowing being Friday. If you mow Thursday you are limited to your next mowing being Monday. If you mow Friday, you can either mow Monday or Tuesday.

**"Tricks of the trade" for maintaining the appearance and playability of your turf**

when mowing on a 3 – 4 day schedule.

1. Prioritize between playing areas and common ground.

2. Watch the weather reports and vary your Monday – Tuesday or Thursday - Friday mowing day based on the forecast

3. If growth patterns allow, you can lower the height by ¼" on the 3 day cycle to gain some wiggle room in the schedule

4. If you mow in the rain, or when the grass is excessively wet, you can raise the height ¼" to minimize clumping and lower it back on the next 3 day cycle

5. If clippings start to accumulate you can mow 3 consecutive 3-day cycles to help eliminate excessive clippings. (Tuesday, Friday, Monday, Thursday.) In this situation you would have to mow the following Monday to maintain a maximum of 4 days between mowings.

6. If you miss a day, raise the height ¼" the following day and lower it back on the next normally scheduled mowing day.

7. As growth slows later into the summer and again in late fall move to a 4 – 5 day schedule by mowing Friday, Wednesday, Monday, Friday (in that order). It's the only way to maintain a 4 - 5 day mowing schedule without mowing on the weekend. Only every other week requires two mowings,

providing substantial labor savings while maintaining turf quality.

Regardless of what type of turf you maintain, when it comes to mowing management, "the proof is in the putting".

\*Jim Hermann is President of Total Control Inc., Athletic Field Management and Consulting. ♦

---

## **Don't Miss the 2004 Rutgers Turfgrass Research Field Days!**

---

by Brad Park, Rutgers University  
[park@aesop.rutgers.edu](mailto:park@aesop.rutgers.edu)

---

The 2004 Rutgers Turfgrass Research Field Days - "The Finest Programs in the World" – are an annual highlight on the calendar of events sponsored by the New Jersey Turfgrass Association and the Rutgers Center for Turfgrass Science. The Lawn and Landscape Field Day will be held **Wednesday, July 28, 2004** at the **Adelphia Research Farm**. Registration will begin at **8:00 am** and the first 50 registrants will receive a free cap. Presentations will be given on a wide range of topics including turfgrass species that are commonly utilized on New Jersey sports fields and the latest weed control programs and products. Research plot tours will conclude at 3:00 pm.

The Golf and Fine Turf Research Field Day will be held on **Thursday, July 29, 2004** at **Hort. Farm II – Ryders Lane** in North Brunswick, NJ. Registration will begin at **8:30 am**. Tours will end at 3:00 pm.

A separate \$35.00 fee (includes lunch and morning coffee) will apply for each day, but those who wish to attend both Field Days may do so. **Pesticide recertification credits will be offered on both days.** For additional information please call Dick Caton 856-853-5973; or Marlene Karasik 732-932-9400 x 339.

Also, it's never too early to mark your calendars for the **New Jersey Turfgrass and Landscape Expo 2004**. Expo 2004 will be held **December 7, 8, and 9, 2004** at the Trump Taj Mahal Casino-Resort in Atlantic City, NJ. ♦