

# SPORTS TURF MANAGEMENT DURING LATE WINTER AND SPRING

By James Murphy, Ph.D.

## CLEAN-UP

Leaves, sticks, and other debris that accumulate on the grass over the winter should be raked up when weather permits. Debris lying on the turf too long can smother the grass and create bare spots. Bare spots will increase the invasion of weeds later in the season.

Use small equipment with wide, low pressure tires to pick up debris whenever feasible. Be careful not to drive large equipment (pickup trucks, etc.) equipped with narrow high pressure tires on playing surfaces during late winter and spring; stay off to the sides of fields with large equipment. The load and high pressure created by tires on large equipment can deeply rut the playing surface. Thus, creating additional work (repair) and a less safe playing field until the repair is complete.

## SPRING MOWING STRATEGIES

As temperature and soil water conditions become more favorable for growth, turf will break dormancy and green-up. Vigorous growth and minimal environmental stresses during spring can lead to a false sense of security. Spring is a critical time to use proper mowing frequency and cutting heights along with appropriate nitrogen fertilization to encourage good root growth.

Peak shoot growth occurs at 60 to 75 °F during the spring. Additionally, roots will be extending deeper into the profile at this time, if properly managed. Mow at the correct height and frequency (remove no more than 1/3rd of the leaf tissue); otherwise excessive defoliation during mowing will deplete the carbohydrate (food) supply of the turf. Excessive defoliation will cause roots to stop growing and possibly dieback under severe mower scalp. Additionally, recovery from scalping will be slower than you might expect due to the low carbohydrate supply described above. Scalped turf will have low vigor and density, which will allow weeds such as crabgrass and goosegrass to invade later in the spring.

Be prepared for wet (rainy) weather that interrupts the mowing schedule in the spring. It can be difficult to mow at the desired frequency when sports fields are wet. Under this scenario, shoot growth can become excessive if fields were not properly mowed and fertilized up to this point in time.

## NITROGEN FERTILIZATION

Fertilization with nitrogen is a valuable management tool for sports field as long as it is done correctly. Table 1 summarizes the basic timings and rates of N fertilization recommended for sports field. These recommendations should be used to initiate a fertilization program with the recognition that adjustments will be made as turf performance dictates (see footnotes in Table 1). Sports field receiving limited use in the spring should have N fertilization delayed as late as May to avoid over stimulation of the turf and increasing demand for mowing. Sports field being used in the spring should be fertilized with nitrogen as early as March to encourage the vigorous growth needed to tolerate and recover from intense springtime use. Use soil testing to determine the need, if any, for lime, phosphorus, potassium, etcetera. (Brad, please place an ad for Rutgers Soil Testing near this article, Jim. I will pay for the ad if necessary.)

TABLE 1. Minimum nitrogen fertilizer timings and rates for sports fields based on season of use/play.

Month	Spring Sports	Autumn Sports	Year-round multi-use
Pounds of Nitrogena per 1000 ft <sup>2</sup> (acre)			
March	1 (44)	0	1 (44)
May	0	1 (44)	1 (44)
August/September	1 (44)	1 (44)	1 (44)
October	1 (44)	1 (44)	1 (44)

<sup>a</sup> Typically, at least 30% of the nitrogen is applied as a slowly available form, also known as water insoluble nitrogen [WIN]. Slowly available forms of nitrogen include natural organics, IBDU, sulfur-polymer coated urea, methylene urea, and others. Nitrogen rate can be adjusted up to 1-1/2 pound if turf conditions at the time of application are poor or down to 1/2 if turf conditions are excellent.

When sports turf becomes overgrown, it is best to return to the desired mowing height over several cuttings rather than one aggressive cutting ("cutting hay"). Raise the cutting height so that you cut about 1/3rd of the total height of the turf and then decrease the cutting height with each successive mowing. For example, if conditions result in a 5 inch turf height and the desired mowing height is 2 inches, the next mowing should be at 3.5 inches followed by a mowing at 2.5 inches and finally mowing at the desired 2 inches. If feasible, it is also helpful to increase the mowing frequency during the time that the turf height is being reduced. For example, mow the field at 3.5 inches two times per week rather once per week, then two times at 2.5 inches, etcetera.

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