

Keys To An Optimal Playing Surface

by Bryan Wood

One of the keys to achieving optimal playing conditions on athletic fields is to create a high “bio-mass” content. Bio-Mass as defined by Dr. Minner of Iowa State University Turf Dept. is the total of leaf shoot density, root density, matt, and thatch. This bio-mass profile is what we play on, not just the leaf blades on the surface.

Here are some helpful tips to building good bio-mass:

1. Mow lower / more frequently. Turf managers who raise their mowing heights during summer are decreasing the density of their turf before the season even starts. Dr. Minner recommends maintaining cool-season athletic fields at 2” or below and warm-season fields at 1.5” or below. 3-4” on cool-season turf is too high! Remember, higher mowing height equals fewer shoots per sq. inch. You want maximum density.
2. For football fields, if your budget permits, you may choose to use “Primo” (or similar product) in May, June, and July. This has been shown to improve turf density. And by ending its use in July, the growth regulator will be worn off by football season for maximum healing potential.
3. Besides the physical wear and destruction of turf, one of the silent factors which prevents a good bio-mass build-up may be a high worm population. Because worms destroy needed thatch (and we would love to have thatch especially in the center section), worms must be controlled by timely insecticide applications.
4. Seed heavy, seed often: Seed after aerifying, broadcast seed during the season and let the players “cleat” it in, and slit seed in the off season. If only a small percent of these seedlings survive, at least some turf is better than none.
5. Fertilize. Apply 1 lb. N. per 1000 sq. ft. per growing month. This is 6-8 lbs. of nitrogen per year, depending on cool or warm season grass. This will help build bio-mass! You may choose to just perform this extra “push” in the high wear areas and not the outlying areas. On warm season Bermuda grass you should increase K. (potassium) levels through the late summer and fall to help the turf harden up for winter.

Finally, deep tine aerify with solid tines at least twice per year. Remember that shallow core aerifying will reduce bio-mass, so solid tines are recommended in this case. If thatch is a problem outside the hash marks or in lower traffic areas, then a coring tine can be used. (Refer to the article “Everything You Always Wanted to Know About Aerifying But Were Afraid to Ask” at www.commercialturfandtractor.com). Add the use of sound grub, insect, and disease control, plus proper irrigation and you should have athletic fields to be proud of.