# All Organics Are Not Equal

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The summer of 2007 was the summer from Hell in many areas of the United States. In many parts of the Midwest triple digit temperatures were the norm and ninety degree temperatures hung on well into October. Depending upon the location, these extreme temperatures were either accompanied by extreme drought or flooding. Either situation was not exactly ideal for producing quality turf.

More and more superintendents are finding that the use of organics during the heat of the summer can be a much safer and more effective way to furnish the needed nutrients to both the soil microbes and the plants themselves. Many have found that Nature Safe is the safest and most effective organic product they can possibly use. Nature Safe all organic products are 90% water insoluble and they contain as much as ten times more amino acids than many other organic products. When using Nature Safe products such as 8-3-5, 5-6-6 and 10-2-8, it is also practically impossible to burn tender or stressed turf, even if the temperatures are in the extreme range. This has led some superintendents who have used Nature Safe to think that all pure organic products are equally as safe as Nature Safe, but that they cost less.

This summer, a number of superintendents found out that the organic products they substituted for Nature Safe in an attempt to save a dollar or two a bag were not as good as Nature Safe. In fact, they proved to be very expensive substitutes for Nature Safe. When some of these products were used during the extremely hot weather, they burned and killed the turf. This occurred because many of them contain high percentages of water soluble nitrogen that can cause reverse osmosis which desiccates the plant tissue and kills it (we say it burned the turf). This is especially true of some of the manure based products. Most of these products are either derived from composted chicken or turkey manure. In some cases it is not even composted, it is only dried. Dried manure has an even greater chance of burning turf than composted products. Manure from flocks of birds tends to be high in free urea, particularly if it is not completely composted. One product in particular is a 5-4-5 chicken manure product that contains 40% water soluble nitrogen. The smell of ammonia that emanates from the bag when it is opened is proof that this water soluble nitrogen is in the ammonium form, and ammonium forms of nitrogen are known to burn.

Some other small companies that sell manure products do not even bother to list the amount of water soluble nitrogen that is contained in their products. That is actually illegal, but because these companies are so small and numerous they are usually able to fly under the radar screen of the regulating agencies. However, this failure to list water soluble sources contributes to burned turf because superintendents think that because it is not listed on the bag, none is present in the product. That of course, is not true because all manures from birds contain certain levels of water soluble nitrogen. Not listing it will not make it go away.

Even though the summer of 2007 presented many challenges for most superintendents, it proved once again that the regular use of Nature Safe can produce healthier turf that is better able to withstand the rigors of even very bad summers. The high levels of amino acids in Nature Safe feed the beneficial microbes that help to suppress diseases and nematodes in the soil that attack the roots of the plants, sap their strength and reduce their ability to hold up to the many stress factors they face on a regular basis. This leads to a more fibrous root system that is better able to make good use of the nutrients and water that is available in the soil. In addition, the low salt index found in Nature Safe reduces the plants need for water and allows it to subsist with less irrigation.

Dr. Al Turgeon, the noted turf researcher, author and educator at Penn State University has always spoken of a stress budget for any given plant. According to Dr. Turgeon a plant can withstand just a certain amount of stress before it gives up the ghost and dies. This stress can come from a myriad of factors such as heat, compaction, pathogens, low height of cut, etc., but, when all the stress factors totaled together exceed the plants stress budget, it will die. Obviously if Nature Safe reduces the stress factors from so many different sources, the plant will have a much better chance of surviving extreme conditions and the superintendent will have a much better chance of surviving the summer with his health, sanity and job.