

Necessity forces change

Why don't we change our thinking in regards to aerification and other agricultural practices? The government is looking at making us more effective in regards to chemical and water usage. Government properties including all sports turf areas, golf, athletic fields etc. must reduce water and chemical usage by 20% by the year 2014 based on year 2009 usage. The success or lack of reduction of chemical and water usage in regards to government properties will play an important role in regards to private properties, especially in regards to golf courses because of the amount of land involved if for no other reason. This reduction in chemical and water usage while improving turf health is being achieved by understanding and *balancing physical properties*.

PHYSICAL PROPERTIES ARE THE FOUNDATION OF EFFECTIVE USE OF CHEMICALS AND WATER.

The need to use physical property assessment in regards to our agricultural practices has always been there, however we as an industry [Sports Turf] have elected to put the information of physical properties on the back burner as "there are no classes on physical properties and the role they play in establishing and maintaining healthy turf taught in our colleges and universities". This is not the fault of our colleges and universities as the true knowledge of physical properties for [Sports Turf] did not emerge until a research centre that deals only in physical properties research was established in 1990.

This physical property research developed into a field separate from the science of soil chemistry.

To maintain healthy turf we must understand all three of the properties [Physical, Chemical, & biological] The Physical portion of the three properties dictates in *total* how the other two [Chemical & Biological] will function. **THE PHYSICAL IS OUR FOUNDATION.** We, as an industry [Sports Turf] have learned to work with all three properties with an interaction between the three.

One of the most gratifying parts of my travels is when I am working with a superintendent who has taken the time and made the effort to understand the interaction of the three properties. These superintendents are true professionals and a credit to the Sports Turf industry and to the course that is depending on them to produce the best turf with the resources at their disposal. These superintendents are making the maximum with their resources and almost without exception they are producing and maintaining a quality of turf that was unthought-of just a few short years ago.

One of the least gratifying parts of my travels is when I am working with a superintendent who has not taken the time or made the effort to understand the interrelationship of the three properties. In most of these cases the superintendent has not been able to justify in his mind the expense of doing physical property testing which is around \$3,000 for the first year benchmark and less the following years depending on the condition of the physical properties and what action needs to be taken and monitored.

When a superintendent is able to justify in his mind the pursuit of knowledge in regards to physical properties, the savings in chemicals and water far, far offsets the cost of the initial testing. The understanding of physical properties is a must in today's world. The majority of the top courses in the world today base their agronomic procedures on the *science of physical properties*.

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