

much work has gone into research. A sand in the medium particle range appears to be the best. Economics dictate the depth of any imported sand. Most of the systems mentioned earlier make use of an underground system of piping below the rootzone and attached to extraction pumps. The water may be removed to holding tanks to drain the field or reversed to supply water or fertilizer in combination through the irrigation system.

The advantage of the sand field is that a crown is not required. An 18-24" crown was used as a standard procedure in football field construction to remove surface water. Therefore a sand football field, if properly constructed and maintained, will move water through its profile faster than irrigation or rain can apply it. This is beneficial because the field can be used for other sports where a crown is undesirable (soccer or field hockey).

The challenges of this trend in field construction are the different nutrition and irrigation regimes. Nutrition studies on many sands indicated that nitrogen, phosphorus, and sulphur were always deficient. While you can't manage sand fields like soil fields, they can be managed, e.g. fields in North York, Vaughan and Mississauga, Ontario.

The sand football field responds to many of the difficult problems associated with the high use football and soccer fields. Overuse still causes wear damage to the sod but even

in wet weather, good footing makes the field playable. The sportsfield manager does not have to wait for the field to dry out in order to carry through with his maintenance program.

CHEMICALS AND FERTILIZERS

The leaning here is toward fertilizers which will release nutrients uniformly over several months, rather than the water soluble types which leach more readily.

New, improved herbicides, fungicides, and insecticides, with lower mammalian toxicity, reduced eye and skin effects, lack of odour, use of more water soluble packets instead of emulsifiable concentrate formulations for less waste. Finally more biological controls including a natural fungus that kills dandelions, developed by Dr. Lee Burpee of the University of Guelph. Considerable government and private interest has been shown in this research. The chemicals above are being evaluated for broader spectrum systemic qualities, in a trend towards integrated pest control.

Although the Sports Turf Association is Ontario based, membership is available to anyone in the turf industry in Canada who is interested. If you require more information please contact: Michael J. Bladon, Sports Turf Association, 185 Edinburgh Road South, Guelph, Ontario, N1G 2H8. Phone: (519) 824-4120, ext. 3460.

BEAT NEGLECT ON THE PLAYING FIELD

GROUNDS CARE MUST STRESS PREVENTION – OR YOU'LL PAY DOUBLE LATER

by Kent W. Kurtz, Ph.D.

Almost every child has developed motor skills, coordination and philosophies — and experienced "the thrill of victory and the agony of defeat" — on the school playground or athletic field. Since the formative years are the most important in a child's development, the playground and athletic field during these years are very crucial to the child's future and an integral part of the child's success.

If the playground and sports fields are so vital to our students' educations, why then are we so careless with them? Take a close look at the playgrounds, parks, ball fields and sports facilities in your community — are they safe? Unfortunately, the vast majority show deterioration, neglect and worn-out turf. Many of these facilities are hard, compacted, dangerous and very unsafe. Holes, depressions, litter, debris, glass, metal and other hazards are far too abundant.

The problems are most often the direct result of poor or faulty construction, shortcuts, politically motivated change orders, shortsightedness, a lack of knowledge or funds, or the implementation of the wrong priorities by misinformed administrators or novices. It doesn't make sense: decisions are made to save money and costs initially, but then we pay later with higher maintenance costs in order to try to rectify the condition.

Many public agencies and schools find themselves in trouble from the outset because of the low-bid process in awarding contracts. It is a fact that most contractors have no background or experience with the proper construction and/or maintenance of athletic fields and they really don't have time to learn. They lack the expertise and knowledge of soils, soil management, and soil modification, proper drainage and surface uniformity, water infiltration rates, use and compaction requirements and the proper turfgrasses to use for heavy



wear and tear. The bottom line when the low-bid contractor is selected, in most instances, is a very expensive ongoing maintenance program.

Problems that are directly attributed to the construction phase are most often soil-related. The playgrounds and athletic fields that exhibit poor drainage and severe compaction problems are normally due to poor soil preparation during

construction. Often the absence of a good site survey and the lack of soil analysis (both physical and chemical) are responsible for failure.

However, many problems arise due to the installation of improper drainage systems or none at all where there should be one. Where irrigation systems are utilized, many school districts or campuses turn the job of installation over to plumbers rather than someone who is familiar with irrigation and design of sports fields. Mistakes of this nature may result in poor water distribution, improper infiltration rates of water moving through the soil, or fields that are either oversaturated or droughty.

The Wrong Turfgrass

The second most common problem experienced on fields is the selection of the wrong turfgrasses. Recommendations by so-called "turfgrass consultants" or "experts" are easy to come by and are not generally based upon research of local conditions, or are not well-thought-out beforehand. Turfgrasses must be selected for the conditions at hand and must be based upon the site, climate, soil type, use intended, funds available for care and maintenance, personnel available to maintain the site and, in some cases, the type of mowing and turf care equipment available to care adequately for the species being grown.

There is often a lack of knowledge of the specific capabilities of the grasses, the nature and properties of the soils, and the interaction of use with grass and soil. This is compounded by the common problems of poor-use discipline, overuse and abuse.

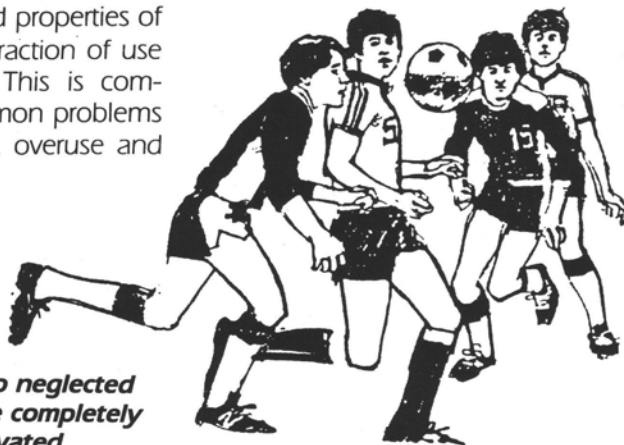
Many facilities are so neglected that they need to be completely rebuilt or renovated.

Many community playgrounds, ball fields and youth sports facilities are in poor condition, deteriorated or rundown as a result of ill-advised or poor fiscal responsibility. For too long, sports fields have had to take a back seat to other budget priorities. Many facilities are so neglected that they need to be completely rebuilt or renovated. Many of these crisis situations could be prevented with a moderate budget and a weekly maintenance program.

Care now or lawsuits later?

Beware! Lawsuits and litigation in today's society pose a big problem for all public agencies. If the courts can prove negligence, everyone within a public agency can be dragged through a very unpleasant experience. Based upon prior experiences, many schools and municipalities are being denied liability insurance coverage. In 1984 there were more than 189,000 children in the U.S. who required hospital care for playground injuries. Back in 1980 there were 130 verdicts of \$1 million or more awarded across the U.S. for liability - "negligence" - cases. By 1984 there were a record number of 401 verdicts totalling \$1 million or more, and many of these were playground related.

If schools can show they are attempting to rectify conditions, court may be more lenient.



Most injuries occur on hard surfaces that have been severely compacted and are devoid of a good turf cover. If schools and other public agencies can show they are attempting to rectify the playground and athletic field conditions, courts may be more lenient toward such entities. Well-cared-for natural grass and the



correct soil composition beneath it offers the participants forgiveness, and turf is softer, safer and more resilient than fields without grass. Injuries may still occur on natural grass, but chances are they will be reduced in severity and frequency.

Common problems found on playgrounds and athletic fields, whether they are attributed to poor construction, inadequate maintenance or too many activities, can all be solved. Unsafe field conditions and liability hazards can be avoided if the personnel at all levels within an organization cooperate. This means a strong interaction between grounds personnel, administrators, athletic directors, coaches, band directors, business managers, school boards, the parents and students. These people must work together, learn together, share knowledge, share ideas, attend conferences, seminars and trade shows, try new products and equipment, try new concepts and keep an open mind.

Reprinted from the February issue of "American School and University Magazine".