

Poster — Safety & Health Protection  
On The Job.

Who is fined and who goes to jail? The last person who had a chance to correct a potential or real hazard and didn't. At a golf club that person many times would be the superintendent.

A good superintendent wants to protect his men anyway. But with the enforcement of this act it would be wise to take a very close, critical look at conditions in your work area and equipment being used by your employees.

## NEWSLETTER MAILBAG

### THE SUPERINTENDENT'S FRIEND

The death of James E. Thomas, known by his friends and associates as (Jimmy) was quite unexpected. It came as sad news and a great shock to all who knew him.

As we travel down life's path we all meet and make many exceptional acquaintances. Jimmy's friendship was one of life's rarities, in that you could trust and depend on him at all times. His words and deeds could be accepted as gospel truth.

Jimmy will be remembered by both the Middle Atlantic Superintendents Assoc., and the National Assoc., for his many constructive contributions. Through his ideas and suggestions our associations made great progress.

Jimmy was dedicated to his profession. He was a very humble and compassionate man with an abundance of turf knowledge. Jimmy and I traveled together to many of our local and national meetings. Our wives would on these occasions get together for ladies' talk, while Jimmy and I would discuss turf and association business. Ironically one of Jimmy's pet subjects was for the National Association to entertain the idea of a centrally located office in Kansas. Today this is a reality. I wonder what part Jimmy played in this idea coming to its present status.

Jimmy had the heart of a lion and the patience and compassion of a saint. Yes — we have lost a great turf warrior.

Death we all recognize is a certainty, the only uncertainty is the time and place. Jimmy, God rest his soul, passed away doing what he knew and loved best, growing turf and keeping a nice golf course.

May I say — to Ruth, Jimmy's lovely and devoted wife, you have our deepest sympathy. Take care of yourself, God bless you. We have you both in our prayers.

TOM DOERER, JR.

## Job Wanted

### Asst. Supt. Seeking Mid-Atlantic Employment

Michael T. Hess, Hemlock Farms, Lord's Valley, Box 1000  
Hawley, Pa. 18428

Age 21

Experience: Asst. to Harold Drennen, Buckhill Inn, Canadensis, Pa.

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## LIME —

## Ageless Aid To Turf

The following article provides us with information from a turf course at Rutgers University back in 1947. Asst. Prof. T. C. Longnecker presented to his class a paper titled "The Role of Lime in Turf Management", which included all the up to date knowledge of the benefits of lime on turf grasses. This paper, condensed here, shows us how the values of lime are unchanging through the years.

Angelo Cammarota submitted this 26 year old publication from his back files of school papers. You will all see that this paper can easily be presented, unchanged, for valuable information at any turf meeting today.

The term lime, as it is generally defined, includes all compounds of calcium and magnesium employed in a practical way to correct the effects of an overly acid soil. It should be noted that magnesium as well as calcium compounds are considered liming materials, and that the purpose of applying lime is to correct the effect of soil acidity and not simply to raise the pH. The soil pH usually rises following applications of lime but this is of secondary importance.

The role of lime is two fold in its effect on soil and plant growth relationship. First of all lime has many direct effects upon the soil both chemically and physically and these changes affect plant growth. Secondly, both calcium and magnesium are essential plant nutrients and have an extremely important role to play after being absorbed into the plant tissues.

Since the first effect of a lime application is upon the soil itself, first consideration should be given to the role it plays in making the soil a more favorable medium for grass growth. Magnesium lime and calcium lime are, for the most part, equivalent in their effects upon the soil. These effects can be listed as follows:

1. Promotes more desirable granular soil structures.
2. Soluble iron, aluminum, and manganese are tied up in an insoluble form.
3. More phosphorus and potassium are made available for plant growth.
4. Favors activity of micro-organisms (decomposition, ammonification, nitrification, nitrogen fixation).
5. Raises the soil pH.

Soil structure is extremely important in the growth of all plants but it is particularly important on turfed areas. A soil which has a granular structure is more permeable to water and has better drainage and aeration. In the heavier soils such as loams and clay loams there is always a tendency for the fine particles to become too closely associated which results in compaction with inadequate drainage and aeration. This compaction is more apt to develop on strongly acid soils and the application of lime encourages granulation by causing the fine particles to collect together and function as larger particles. It should be pointed out, however, that lime alone is not a cure for compacted greens.

In making the soil more permeable to water lime plays an important role in the water relationship of turf plants. An extremely large proportion of rainfall both natural and

artificial, will run off rather than penetrate on acid soils. Examinations have been made on fairways soils after more than one inch of rain had fallen, and in spots where the pH was below 5.0, the soil was completely dry below the surface one half inch. The turf on these dry spots was brown and dead in spite of the fact that fairway irrigation was a regular procedure. Lime alone will aid greatly in preventing this summer drought injury since the soil is better able to absorb and hold water where lime is applied.

The many complex chemical changes that are brought about by liming the soil are discussed in great detail. This article describes how lime helps tie up the toxic aluminum, soluble iron, and manganese which are present in acid soils; iron and manganese are only required in small amounts in plant growth. Surface applications of lime on turfed areas penetrate very slowly so that even though iron and manganese are unavailable near the surface, the grass roots in the lower zones are able to absorb the required amounts of these nutrients. Because of the fact that lime penetrates slowly on grass, it is uneconomical to make heavy surface applications.

One of the most significant effects of lime is its influence upon the activity of micro-organisms in the soil. Most of the favorable soil micro-organisms are encouraged by liming. Those organisms responsible for the decomposition of organic materials in the soil are much more active in the presence of active calcium. The turf grasses form a new root system each year and in acid soils these old roots tend to accumulate instead of decomposing and becoming a part of the soil humus. Strongly acid soils may have 10 times as

many roots in the surface foot of soil as a similar soil which was only slightly acid. This accumulation of roots usually results in a sod bound condition, slow water penetration, weak unhealthy grass, and more favorable conditions for disease outbreaks.

In addition to the beneficial effects which lime has in correcting the harmful effects of excessive soil acidity, both calcium and magnesium are essential to the growth and development of all green plants. Thus these elements play a very important role in plant nutrition. A deficiency of either of these nutrients results in growth symptoms on the plant.

In conclusion, it should be emphasized that the proper use of lime, for the role it plays in the physical, chemical, and biological processes in the soil and in supplying essential calcium and magnesium for plant growth, is an indispensable aid in the efficient and economical production of turf.

## Job Openings

### Lakewood Country Club

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Experience required — 2 years as Supt.

Send Resume immediately

Send Correspondence to: President, Lakewood Country Club, 13901 Glen Mill Road, Rockville, Maryland.

### U.S. Naval Academy

Annapolis, Maryland

18 hole private course; Irrigation automatic

Salary open-comparable with experience, cost of living raises; Merit raises; Insurance — retirement & Insurance Benefits; Vacation — 13 days first year; Association expenses paid.

Experience required — Turf mgt. course, 5 years on golf course.

Contact: Capt. W. E. Marquardt, U.S. Naval Academy, Annapolis, Maryland, 21402, Phone: 301-267-2877.

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