

# UNITED STATES GOLF ASSOCIATION

## GREEN SECTION

### WESTERN OFFICE



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WM. H. BENGLEYFIELD  
*Western Director*

## • Western Turfletter •

Vol. 11 - No. 3

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\* WILLIAM C. CHAPIN \*  
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\* Mr. William C. Chapin of Rochester, New York \*  
\* has been Chairman of the USGA Green Section \*  
\* Committee since 1957. On May 22nd he lost \*  
\* his life in the crash of an airplane over Iowa. \*  
\* All of Mr. Chapin's friends in golf are saddened \*  
\* by his passing, but those of us associated with \*  
\* the Green Section feel especially stricken by \*  
\* our loss. He did much to help the cause of \*  
\* better turf in golf. His interest and encourage- \*  
\* ment helped to make the cause seem more important \*  
\* and the work more pleasant. \*  
\*  
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148,000 TONS OF NITROGEN  
AND  
OTHER IMPORTANT NEWS

2. Ref.  
Label coated fert

Now that powdered water is being manufactured (it is, you know), it's almost impossible to surprise people with anything new these days. And yet it's the Green Sections job to help keep you informed and up to date on advances in turfgrass management. We think the fertilizer industry is developing new products just as startling as 'powdered water' and want to tell you about them.

For The Future - - - Maybe

Over every acre of land and water on this earth hangs 148,000 tons of nitrogen! Of this it is estimated that only 3 to 5 pounds of actual nitrogen per acre is brought down annually by the rains and thus transformed into useful soil components. The remaining atmospheric nitrogen remains unavailable to plant life except through some bacterial activity. What a waste!

Within the recent past, scientists have developed a technique by which nitrogen fixing chemicals may be separated from bacteria and stimulated to perform their job outside the bacterial organism. In other words, the nitrogen fixing qualities of clover and alfalfa have been produced by extracting the enzymes from the living cells without destroying them. When the bacterial processes are fully understood, it may be possible to duplicate them economically and thereby tap into the 148,000 tons of atmospheric nitrogen. What an advance for world agriculture!

For The Present - - - Promising

Considerably more practical and close at hand is the development of two new types of slow release fertilizers. These materials are still undergoing field tests but their future seems promising.

Material number one may be known as a coated fertilizer. Individual granules of an inorganic fertilizer are coated with a plastic material. When in contact with water or moist soil, some of the fertilizer is dissolved as water passes through the plastic membrane coat. The rate of diffusion is steady and yet controlled by the thickness of the plastic coating. Outside influences such as temperature, pH, bacterial activity, etc. have little influence on the release rate. Soil moisture is the chief factor.

Almost any form of nitrogen, phosphorus, potassium or mixed fertilizer can be coated. In some cases the release of nutrients has been extended over a six month period. One limiting factor (on putting greens) concerning this material is the size or thickness of the plastic coat. Several coatings produces a rather large granule. Currently, tests are being conducted on turfgrass by Dr. O. R. Lunt of UCLA at Hillcrest CC, Los Angeles in cooperation with Chuck Priday, Superintendent.

The second group of materials are those known as "metal ammonium phosphates". Magnesium ammonium phosphate and ferrous ammonium phosphate are the most promising. Although less likely to become a factor in turf management (their phosphate level is too high), these materials have an

unusual method of dissolving in the soil solution. Only so much of the fertilizer will go into solution at any one time. This depends on the concentration of the nutrient already present in the soil solution. When the nutrient level is reduced by leaching or used up by the plant, more of the nutrient will be 'released' and enters the soil. Using this principle, very large quantities of this type of fertilizer could be applied without any fear of 'plant burn'.

These new materials will continue to be tested and we shall keep you informed of the results. The fertilizer industry is moving ahead rapidly and you will want to keep up with its pace. - - When it comes to quality turf production, you just can't beat Fertilizers.

EMERGENCY ASSISTANCE

FOR GREEN SECTION SUBSCRIBERS

No one ever knows when or where turf difficulties may arise this summer. Nevertheless, emergency assistance (at no additional cost) is available to all Green Section subscribers should it be needed.

Travel commitments during the summer months may make it difficult to make contact with the Western Green Section Office at the telephone number listed on our stationery. If telephone contact can not be made at this number, please call JEFFERSON 7-8694, Garden Grove, California. Mrs. M. Siegel, Green Section Secretary will have the complete itinerary of staff travels and will be happy to pass along this information.

USGA Has New Publication "GOLF RULES in PICTURES"

The importance of knowing the Rules of Golf for the superintendent (and even for his crew) cannot be overstressed - but is often overlooked. Now, with this latest publication and first graphic illustration of the Rules authorized by the USGA, all golf course personnel have the opportunity to become more professional in their job by gaining greater knowledge and understanding of the game.

Wm. Ward Foshay, Chairman of the USGA Rules of Golf Committee, notes in the introduction: "The object of this book is to make some of the fundamental Rules situations come to life. . . The game contains many rights for the player. . . It is an expression. . . of the golfing customs which generations of sportsmen have found fairest for all."

Copies of "Golf Rules in Pictures" are available for \$1.95 from the USGA, 40 E. 38th Street, New York 16, N.Y. or at your local bookstore or pro shop.

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Many receive a criticism and think it is fine; think they got their money's worth; think well of the teacher for it, and then go on with their work just the same as before. That is the reason much of the wisdom of Plato is still locked up in the pages of Plato.

Robert Henri

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Garden Grove, Calif.  
Permit No. 83**

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