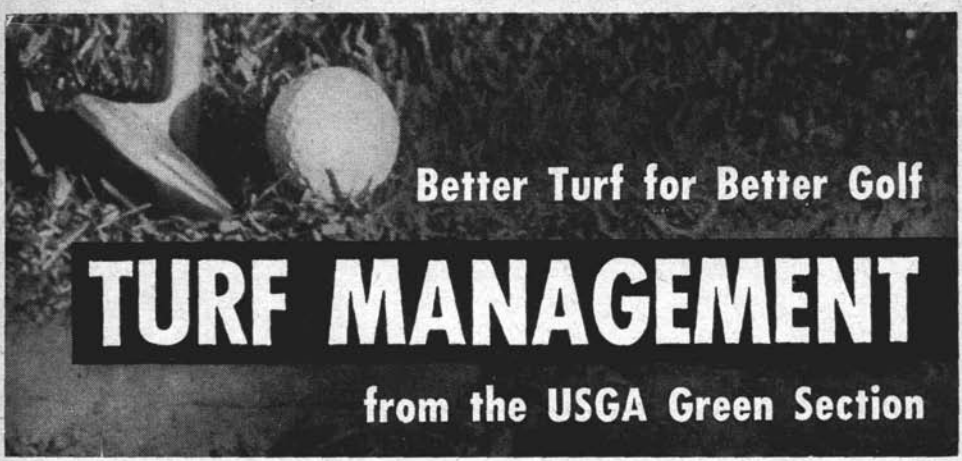

Be Careful With Organic Fertilizers Containing Urea

by CHARLES G. WILSON

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Urea is an inexpensive, synthetic organic source of nitrogen. Often it compares favorably in cost per unit of actual nitrogen with other water soluble sources like ammonium sulfate, ammonium nitrate or calcium nitrate. For this reason it deserves consideration when a fast-acting nitrogen material is desired to stimulate rapid growth.

As with any water soluble source of nitrogen, urea is short-lived and can burn the grass unless proper precaution is taken to water immediately following an application. This burning factor, plus an overstimulation of the turf which intensifies disease problems, has been noticed by a few of our Member Clubs.

The responsibility for turf damage lies not with the urea or with the superintendent but with the manufacturers through misrepresentation, and state fertilizer laws that allow urea to be listed with other organic sources of nitrogen. To cite an example, the California fertilizer code requires a manufacturer to specify the minimum percentage of nitric, ammonic, organic nitrogen and total nitrogen from all sources. It is also necessary to state the specific materials from which organic nitrogen is derived, and cyanamide and urea may be claimed as organic nitrogen.

Thus it is possible to purchase an all-organic 6 per cent nitrogen fertilizer which reacts in a manner that closely approaches ammonium sulfate. One brand that we recently checked fell in this category, with the organic sources listed as "urea, cyanamide, tankage and seed meals." Cyanamide is not of great importance as a large source of readily available nitrogen in mixed fertilizers, since it is used primarily as a physical conditioner. A letter to the manufacturer of this material requesting a percentage breakdown of the various organic sources failed to elicit the courtesy of a reply. A check with the state fertilizer control board's chemist further informed us that even a chemical analysis of the material would be no guarantee that subsequent shipments would have the same percentage breakdown. Thus, a club using this material would never know exactly what to expect in the way of turfgrass response, unless a chemical analysis is made each and every time a new shipment is purchased.

True Organics Release Nitrogen Slowly

One may well ask: "Why all the fuss? The fertilizer must have the minimum amount of nitrogen listed on the bag, and what difference does it make whether the

source is water soluble or slowly available?"

The answer to this question is:

1. True organics (turf agronomist's term) like activated sewage sludge, seed meals and tankage release their nitrogen slowly over a long period of time. This allows the superintendent to fertilize less frequently and at heavier rates for any given application. The result is more uniform playing conditions for the golfer and under most circumstances a decided savings in labor.

2. True organics can be applied at heavier rates than water solubles without burning the turfgrasses. With many clubs this factor is important because of inexperienced and careless help. Under most conditions it is not even necessary to water immediately following an application.

3. True organics react when conditions are favorable for grass growth. During cold weather they do not break down to release their nitrogen, thus little fertility value is lost through leaching from winter rains.

4. True organics are more costly per unit of nitrogen. Seed meals and tankage command a high price for animal feeds, and activated sewage sludge is costly to process. Therefore, an organic nitrogen fertilizer which contains a high percentage of inexpensive urea should sell at a price only slightly higher than other inexpensive sources of water soluble nitrogen. It is from the standpoint of comparable costs as well as reaction that misrepresentation can take place.

You Have The Right to Know

Perhaps it would be wise again to state that the USGA Green Section holds no brief against the use of water soluble sources of nitrogen. Many superintendents use nothing else, and several use a combination of both water solubles and true organics. Those who rely on water solubles in preference to true organics find that they must apply them at lighter rates, and do so more frequently to provide the same turf density without over-stimulation of turf growth. In the final analysis, the amount of actual nitrogen applied, regardless of source, is the important point to remember.

This article was written to warn our Member Clubs against buying a pig in a poke. Even though it is not required by law, the manufacturer should be willing to state to the individual club the percentages of all types of materials listed on the analysis label. This must be done before the superintendent can make a valid cost comparison and estimate the expected turfgrass response to any given brand of fertilizer.

Turf Management

The book "Turf Management," sponsored by the United States Golf Association and edited by Prof. H. B. Musser, is a complete and authoritative guide in the practical development of golf-course turfs.

This 354-page volume is available through the USGA, 40 East 38th Street, New York 16, N. Y., the USGA Green Sectional Regional Offices, the McGraw-Hill Book Co., 350 West 42nd Street, New York 36, N. Y., or local bookstores. The cost is $7.

WESTERN RESEARCH ACTIVITIES

Flotal Looks Good

Dr. Ray Lunt, Department of Irrigation and Soils, University of California, Los Angeles, recently established a series of seedbed preparation trials to gain preliminary information on the possible value of Flotal in comparison with manure to encourage early turf seedling vigor. Observation of this trial one month after seeding indicated that Flotal was indeed beneficial to growth. This new conditioner is a ferric ammonium organic complex containing 2.4 per cent ammonic nitrogen and 10 per cent iron expressed as metalic. Plots treated with this material had better color, more uniform coverage and considerably more vigorous growth.

According to Gordon Wyckoff, senior