

# TIMELY TURF TOPICS

Issued By The

UNITED STATES GOLF ASSOCIATION GREEN SECTION

ROOM 307, SOUTH BUILDING

PLANT INDUSTRY STATION

BELTSVILLE, MD.

## EFFICIENT METHODS AND EQUIPMENT REDUCE LABOR COSTS

**WHAT'S HAPPENED TO TTT?** The new type used in this issue of TIMELY TURF TOPICS is the result of our change of printers. Our printing is now being done by the Ricker Printing Company, old friends of the Green Section. We hope you will like the "New Look". It is another step forward in our policy to bring you a better publication. Your reaction shall be appreciated.

**NEW FUNGICIDE NAMED:** According to Dr. Norwood Thornton, of the Carbide and Carbon Chemicals Corporation, the experimental turf fungicide #531 has been named CRAG. The March 1947 number of TIMELY TURF TOPICS contains an account of some fungicide trials made by Dr. H. W. Thurston, of the Pennsylvania State College. This account shows the value of fungicide #531 as compared with that of other turf fungicides. Further comments with reference to Dr. Thurston's findings are contained in this number.

**CONTROL OF DOLLARSPOT:** "There is no need for anyone to have dollarspot on his greens." This statement was made by Dr. H. W. Thurston, of the Pennsylvania State College, at the Mid-Atlantic Greenkeepers' Conference in Baltimore, January 15 and 16. Dr. Thurston cited a great deal of evidence to support the use of cadmium compounds for the control of dollarspot. Dollarspot control with these materials is cheaper than it is with mercury fungicides and the growth of grass is not checked, as is the case when inorganic mercury compounds are used. Except where dollarspot is very severe, infrequent applications keep the disease well in check. CRAG fungicide (experimental fungicide #531), an inorganic compound containing cadmium, has controlled dollarspot when applied once a month at the rate of 3 to 4 ounces to 1,000 square feet. Similar results have been obtained using Puratized 177, an organic cadmium fungicide. Both of these fungicides are available commercially.

There is considerable evidence that adequate balanced fertilization is helpful in reducing dollarspot and in making fungicides more effective.

**WEED CONTROL IN ROUGHS:** A weed control program on golf courses should begin in the roughs. Roughs furnish many seeds to infest fairways. In starting a weed control program mistakes are likely to happen. Mistakes made in the roughs seldom are costly. The experience will be extremely valuable when the fairway treatments (if needed) are started.

Roughs that are thin and weedy will benefit from a light application of a suitable fertilizer which makes an excellent carrier for any herbicide in the dry powder form.

Where grassy weeds predominate, sodium arsenite is a useful herbicide. It serves the dual purpose of reducing grub injury. It further reduces the need for frequent mowing by checking grass growth. Several mowings a year may be saved by eliminating weeds which grow rapidly. Grassy weeds should be treated before a crop of seed is produced.

The use of 2,4-D is recommended where broadleaf weeds predominate. Rates of application may vary from one-half pound to one and one-half pounds of actual 2,4-D to the acre as a spray, or two to four pounds to the acre, used dry, mixed with fertilizer. 2,4-D is most effective in early spring and late fall when broadleaf weeds are growing actively.

Part of the complete program in the roughs may be the introduction of grasses which strongly resist weed invasion and which are able to thrive under the usual conditions of drought and low fertility. One of the more promising of the "new" grasses is tall fescue (Alta or Kentucky 31). A reference to Alta fescue appears in this issue.



*ALTA FESCUE*: The following statement is reprinted by permission of Farm Journal, from the January 1948 number, page 112.

#### Alta Fescue for Lawns

If you're looking for a good, tough, drought-resistant lawn grass, try Alta fescue.

That's the word from Oregon, where Alta fescue was first bred by Harry A. Schoth, USDA forage grass research man.

Advantages of Alta fescue as a lawn are that it is very deep-rooted, and stays green in dry weather without irrigation; it is a tough grass, suitable for playing fields and airfields; and it resists a great many of the lawn insects and pests.

Alta fescue up to now has been used mainly in pasture mixtures. Could be that it now will become equally famous as a lawn variety.

The Green Section recognizes the many merits of Alta fescue and its possible use for many types of turf where fine texture is secondary to toughness, drought tolerance, and other service requirements. Research on adapting Alta fescue to turf uses has only begun. Many of the answers are lacking. The Green Section actively has encouraged wide-spread trials of this grass for lawns, golf course roughs, athletic fields, airfields, and roadsides. Observations to date indicate that (1) it will stand mowing at one-half inch under favorable soil and climatic conditions; (2) texture becomes much finer under close mowing; (3) it is naturally highly resistant to weed invasion; and (4) it is not likely to replace bents, red fescues, and bluegrass where these grasses can be grown successfully under ordinary home-lawn management, but it may supplement them in the crabgrass-infested areas.

The 17-acre front lawn of the Bureau of Plant Industry Station at Beltsville, Maryland, was seeded to Alta fescue on September 12, 1947. The soil on the site is a very poor gravelly sand, with practically no organic matter. Enough rain fell to permit good germination. After September 25 the very young seedlings were subjected to a 32-day drought during which there was less than one-third inch total rainfall. The average root depth on November 5, 1947, (determined by an average of 26 measurements) was 7.3 inches. This area is now covered with an excellent turf. It will be used for evaluating maintenance practices and in determining the advantages and limitations of Alta fescue for lawns.

Experimental plantings of Alta fescue at the Beltsville Turf Gardens indicate that spring plantings do very well in spite of the competition from crabgrass.

*BERMUDA GRASS*: During the Mid-Atlantic Greenkeepers' Conference in Baltimore on January 15 and 16, the group was asked to name the advantages and disadvantages of Bermuda grass for fairways in the crabgrass area. The following good and poor qualities were cited.

#### *Advantages*

1. Drought resistance
2. Good summer turf
3. Sturdiness (wear resistance)
4. Heals rapidly
5. Resistant to weeds
6. Resistant to diseases
7. Resistant to insects
8. Resistant to mismanagement
9. Holds ball up well (good lies)
10. Can be cut closely
11. Tolerant to wide range of soil types
12. Soil can be kept firm and dry

#### *Disadvantages*

1. Encroaches on greens
2. Poor winter color
3. Danger of winterkilling
4. Subject to diseases
5. Coarseness of some strains
6. Crowds out other grasses
7. Difficult to establish
8. Not suitable in shade
9. Tendency to produce a mat
10. Hard to cut
11. Short growing season

It will be noted that some of the qualities which are listed under "Disadvantages" actually may be in favor of the grass. Its aggressiveness in crowding out other grasses is a good quality under some conditions. Difficulty of establishment is not a valid assumption, especially when hulled seed is used. Difficulty of cutting is not serious when sufficient nitrogenous fertilizer is applied. The tendency of Bermuda grass to produce a mat is not serious when it is mowed at 3/4-inch or less and if the turf is raked periodically. Readers are invited to write to the Green Section concerning other good or poor attributes of Bermuda grass.



## BUDGETS AND MAINTENANCE EQUIPMENT

W. H. Glover\*

Every golf course superintendent is faced with the problem of operating within a budget. This means he must accomplish as much as possible on the golf course with the least expenditure of money. Since 1940 the economic picture has changed greatly. The labor situation has been, and continues to be, extremely critical. It is difficult even at high wage scales, to hire men who are competent and who are willing to perform at pre-war levels. Club membership rosters are full, and the play on municipal and daily fee courses is at an all-time high. Equipment in quantity is on its way back toward pre-war levels. Demands for higher levels of maintenance are being pressed on superintendents and crews. These facts all point to the necessity of constructive thinking in the direction of a solution of our current problems of maintenance.

It seems pertinent to look at the relationship between men and machines. Machines do not think. They respond to the control of the operator. Therefore, in order to utilize machines fully, it pays to have a man with a keen mind, some inherent ability, and a desire to work with machines. The hiring of a man of this type takes one immediately into competition with a field where skilled men are paid high wages, given vacations, and are unionized. Thus, it becomes imperative that he be paid higher wages, and guaranteed steady employment and a shorter work week. If this is done, one must select fewer men with higher qualifications and must arrange his schedules to provide year-round employment.

Equipment prices and labor costs have not advanced in a comparable ratio. Day-labor rates have doubled, and the scale for men with mechanical ability has more than doubled. Men who can operate, overhaul, and repair equipment, can add many working hours to the life of a piece of machinery, thus lowering its overall cost. In general, equipment prices are from 25 percent to 50 percent higher than pre-war prices. In view of these facts, it is good business (1) to purchase equipment that will perform maintenance operations; and (2) to acquire a good machinery operator, teaching him to use and maintain equipment, and using him for overhaul and repair work during the slack season.

Manufacturers are recognizing our problems and are producing better equipment and new equipment specifically designed to do more work in a given time. Much hand labor has been eliminated because of the production of machines capable of doing certain jobs faster. New metal alloys have made it possible to produce machines that will perform operations such as mowing greens and that are light enough and flexible enough to permit their use quite generally. Better machinery is being produced for applying seed, fertilizer, fungicides, and insecticides to turf areas, at smaller and more closely controlled rates. This fact is important because recent research work has disclosed positive controls for insects and fungi which have been extremely troublesome in the past. The increased number of control measures demands rapid, accurate, and thorough application techniques.

A revolutionary step has been taken through the design and production of a machine that will till and aerate the soil to considerable depth, without seriously disturbing the existing turf. The operation of the machine on greens, tees, and fairways makes it possible to get air, water, fertilizer, and lime deep into the ground, where they are most effective. At the same time, the soil brought to the surface can be broken up and leveled out as a topdressing on existing turf. This loose soil produces an excellent seed bed on fairways, tees, and approaches. If it is desirable to change the existing soil structure through the addition of better soil than was taken from the green, the soil plugs can be removed. The use of this machine makes it possible to keep water, seed, and fertilizer on the higher elevations where erosion is a problem. Its use on greens loosens the soil sufficiently to allow water and air to permeate the lower levels, where they are definitely needed if healthy root systems are to be established and maintained. This operation can be performed rapidly and, in most cases, it does not put the green out of play for more than two hours. If a change of species in the turf is desired, bent stolons or Bermuda sprigs may be planted in the holes made by this machine. Seeds germinate rapidly in the depressions left by the machine, and because they are at a slightly lower level than the existing turf, the seedlings are protected from the abrasive action of traffic.

This is the time of year for one to take stock of what he did last year and to make plans for the coming season. One must determine what he can do with money available. If the greenkeeper will figure the costs of doing various jobs manually and compare them with the costs of doing the same jobs with machinery, he will be likely to lean toward mechanization. Above all, one should keep abreast of the progress that is taking place in his profession.

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