

# TIMELY TURF TOPICS

Issued By The

## UNITED STATES GOLF ASSOCIATION GREEN SECTION

ROOM 307, BUILDING 4  
BUREAU OF PLANT INDUSTRY STATION  
BELTSVILLE, MD.

**OFF-HIGHWAY FUEL NOT NOW RATIONED:** The Office of Price Administration says that at present gasoline has not been rationed for off-highway purposes, such as tractors and the like for golf courses. Neither is there any anticipation at present of such an action being taken. The opinion of the Gas Rationing Office in OPA is that in some cases local rationing boards may request golf courses to curtail their off-highway use of fuel but no such national restrictions are planned at present. This should be encouraging to the golf courses, particularly as reduced manpower will probably necessitate, if anything, the additional use of power-driven machines.

**NEW RESTRICTIONS ON USE OF OIL SEED MEALS IN MIXED FERTILIZERS:** The situation at present with reference to the use of oil seed meals is critical. Seeds have been produced and it would seem that ample amounts of seed meals should be available for use as both feed and fertilizers. However, the Commodity Credit Corporation has established an escalator for prices such that each month until next June the prices for the meals will be increasingly higher. Perhaps this may be responsible for considerable hoarding and speculation which has produced an artificial shortage. If this is the case, it is regrettable since it means that an order has been issued under date of December 31, effective January 2, to the effect that no oil seed meals may be used in any mixed fertilizers until further notice. It is believed, however, that the chances are good that the oil seed meals will be available in sufficient quantities for use on golf courses late next summer and early fall, although they will probably not be available for use this early spring. It will be noted that the restriction refers only to their use in mixed fertilizers.

**FORMER GREEN SECTION MEN IN THE WAR EFFORT:** Eight former members of the Green Section technical staff are now working directly in the war effort, six of them contributing in an important way in the establishment and maintenance of turf on airfields. All of those working with turf are functioning on a civilian status with the exception of Captain George E. Harrington of the Army Air Forces Liaison Office. Dr. John Monteith, Jr., and Dr. Fred V. Grau have their headquarters in Washington, D. C., with the Army Engineer Corps. Also connected with the Army Engineers are John W. Bengtson in Mobile and Gordon H. Jones in Dallas. Alton E. Rabbitt has recently been appointed to the Bureau of Aeronautics of the Navy Department and is responsible for the turf on the Navy airfields. Although not now working on turf, in addition to these six, two of the younger former members of the Green Section staff have commissions in the Army and the Navy, respectively - Lt. Ian Forbes, Jr., and Ensign Willis H. Skrdla.

**HARVEY L. WESTOVER:** Those who have followed the development of the Green Section since its early days will remember that from the fall of 1926 to the spring of 1929 Mr. Harvey L. Westover, of the Division of Forage Crops and Diseases of the U. S. Department of Agriculture, was Acting Chairman of the Green Section Research Committee during the absence from Washington of the Chairman, Dr. R. A. Oakley. Since 1913 he had been connected with the Forage Crops Office; and although for many years he was in charge of alfalfa investigations, he always maintained a helpful interest in our turf program. It is with sincere regret, therefore, that we record his sudden death from heart complications on January 2, 1943.

January, 1943

## WAR-TIME CARE OF MACHINERY

This winter it is more important than ever before to repair all machinery to be used next season. With manpower at a premium and therefore a greater dependence on mechanical equipment, as well as the impossibility of getting new machines, it is vital from the standpoint of golf course maintenance that all equipment be put in the best possible shape during the "off season." In this connection the Bureau of Agricultural Chemistry and Engineering of the Department of Agriculture says:

"Do not appraise the present condition of a machine by last season's experience or a casual glance which may fail to reveal some weakness or breakage. A careful check of each machine part should be made, noting its condition and need for repair or replacement."

All equipment which is hopelessly beyond repair should be turned in for scrap metal except for parts which might be used in the repair of other pieces of equipment.

**TRACTORS:** With reduced labor, the tractor becomes increasingly indispensable in golf course maintenance. If there were any symptoms last season of the tractor being sluggish, all valves and valve mechanism should be checked thoroughly. If a tractor is several years old the valves may need grinding but with a newer machine there is probably some other cause of sluggish valves. The engine compression can be checked by slowly cranking the tractor by hand. If the crank tends to rebound at each compression stroke, the valves are functioning properly. However, if this rebound is lacking, the valves are not properly closing and the condition which exists is known as leaking valves. Leaking valves may or may not be the result of wear. The operator should have the condition corrected as soon as possible in order to avoid the necessity of removing the cylinder head and having the valves ground.

The valves sometimes stick when carbon from the fuel accumulates on the valve stems. According to the Bureau of Agricultural Chemistry and Engineering, the sticking of valves can be corrected by starting the engine and applying kerosene to the valve stems after the motor has idled awhile. Time should be allowed for the kerosene to work down between the valve stems and the guides. The kerosene will dissolve any gummy accumulation and soften the carbon, thus removing such causes of valve sticking. With an L-type engine-head the kerosene can be applied through spark plug openings.

Other possible causes of sluggishness in the engine may be improper valve spring tension, valve clearance, and broken piston rings. These difficulties as well as the proper seating of the valves all require expert attention, however, and for their correction the tractor should be placed in the hands of an experienced mechanic.

Tractor engines operate at higher temperatures than do autos and motor trucks. It is therefore particularly necessary to take all possible precautions to prevent over-heating of the engine in order to prolong its life. If the tractor over-heated badly last season it may have been due either to a sluggish fan or to leaks in the cooling system. In getting the tractor ready for another year the fan belt and blades should be checked. Loose or worn fan belts should be tightened or replaced, and any damaged fan blades should be replaced or reshaped.

Leaks in the cooling system may be due to defective hose or hose connections, worn packing of the water pump, a bad radiator, or blow hole in the engine gasket. The repair of hose and pump are relatively simple jobs and can usually be taken care of in the shop. A leaking radiator, however, should be put in the hands of an expert repairman, who will not only take care of the leaks already present but detect other weak places which may be repaired at the time the radiator is out of the tractor and thus save repetition of the job and expense as well as unnecessary delays next season. Temporary plugging of leaks with patented remedies usually is not satisfactory because the leaks thus repaired are likely to break open at a time when the tractor is needed most and cause serious inconvenience or delay.

It would be advisable this winter to purchase a replacement of hose and connections, a fan belt, pump packing, or any other articles for which there may be a likelihood of need. To have these on hand may save costly delays.

**BATTERIES:** All storage batteries should by all means be properly taken care of for winter conditions, and especially since some materials used for their construction are already restricted for civilian use. Several principles in connection with the winter care of batteries should be borne in mind.

In the first place, a discharged storage battery will freeze at slightly less than 32° F. with possible damage to the plates. On the other hand, if the batteries are fully charged they will not freeze at low temperatures, although at zero degrees Fahrenheit and lower they possess less than one-half of the capacity to start the motor than under summer conditions. The battery operates the starter best at a temperature of approximately 80° F. If the motors are being used during the winter it is important to keep starting mechanisms, distributor points, spark plugs, ignition cables, and wiring in perfect condition and to use proper winter grades of lubricants in order to conserve the drain on the battery in getting the motor started. All the battery terminals and clamps should be inspected for corrosion. It is difficult for electricity to flow through corroded terminals. However, the amount of corrosion can be reduced by means of an application of oil or grease to the terminal and clamp.

When motor equipment is used only occasionally the batteries should be checked frequently, since they lose some charge each day that they are idle. If left idle for some time the plates are likely to become sulfated, frequently resulting in permanent damage to the battery. It is also important to keep the liquid in the battery slightly above the top of the plates at all times. That part of the plates not in contact with the battery liquid will get no charge and become sulfated.

After adding water in freezing weather it is important that the battery be charged somewhat either in the machine or in the shop. This is important in order to mix the newly added water with the battery liquid. If not mixed, the water which was added may freeze and thus cause damage.

**MOWERS AND OTHER MECHANICAL EQUIPMENT:** All mechanical equipment should be thoroughly cleaned, all movable parts and bearings greased and all bolts tightened. The blades of mowers should be sharpened and properly adjusted for next spring. A thin film of oil over all metal parts will prevent the formation of rust.

**HAND TOOLS:** The life of all hand tools should be extended as long as possible by removing all dirt and rust, coating all metal parts with a thin film of oil and painting the wooden parts.

A generally satisfactory rust removing paste can easily be prepared according to the formula published in the March, 1942, issue of **TIMELY TURF TOPICS**.

The formula calls for 2 parts, each, of oxalic acid and phosphoric acid (usually an 85 percent solution has been used), 1 part of glycerin, and 5 parts of ground silica. In preparing the paste the first three ingredients are mixed and then enough of the ground silica added to make a paste of the desired consistency. This has usually been approximately 5 parts, but the amount may vary with the fineness at which the silica is ground. Any fairly finely ground inert material such as diatomaceous earth or pomace stone may be used.