TIMELY TURF TOPICS

Issued By The

UNITED STATES GOLF ASSOCIATION GREEN SECTION

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WASHINGTON, D. C.

RENOVATING ESTABLISHED TURF: This is the time of year when poor turfed areas should be repaired. The soil on bare spots can be loosened by raking or spiking, seed sown, and fertilizer applied early in September. If turf grasses are present but in a thin stand, it is usually found to be more economical to fertilize liberally with a high-nitrogen fertilizer than to reseed. If fertilizer is applied early in September it will give the turf grasses a chance to take advantage of the more ideal growing conditions during the fall months in the absence of severe competition from weeds. However, if the turf is heavily infested with crabgrass, the fertilizer should not be applied until after the crabgrass has been checked either by cold weather or by chemical treatment.

CUTWORMS AND ARMY WORMS: This time of year both cutworms and fall army worms are injuring turf, the damage from the latter being particularly severe in the South. Both of these worms may be controlled either by poisoning the vegetation they feed upon with stomach poisons such as arsenate of lead or by distributing poisoned bait.

For arsenate of lead to be effective against these worms, the grass blades should be coated with it. When applied in a spray, it should be used at the rate of 1½ or 2 pounds to 1,000 square feet and the spray so directed that the bases of the leaves are well coated. When applied as a dust, 2 to 4 pounds of the arsenate of lead should be mixed with 6 quarts of screened and dry sand, soil or organic fertilizer and applied to 1,000 square feet. The turf should not be watered for at least 24 hours after the application of the arsenate of lead. In dry weather it is advisable, therefore, to water the turf thoroughly but allow the foliage to dry before applying the poison. Although the arsenate of lead is more expensive than the poisoned bait, it is eventually washed into the soil where it remains for some time and acts as a control for earthworms or grubs.

An effective poisoned bait can be prepared according to the following formula:

Wheat bran	50 pounds
Paris green or white arsenic	2 pounds
Black molasses	2 quarts
Water	2 to 4 gallons or more as needed

The poison and dry bran should be thoroughly mixed. The molasses should be diluted with some of the water and then mixed with the poisoned bran after which sufficient water should be added to make a moist, crumbly mixture. The bait is more potent if allowed to stand for several hours after being mixed. It should be scattered just before nightfall at the rate of approximately 3 pounds to 1,000 square feet.

The contact poisons such as pyrethrum, rotenone, and derris are not recommended since they are relatively expensive and not so effective as the other methods of control.

EXTREME BROWNPATCH INJURY: During the past season particularly severe attacks of brownpatch in certain sections of the country have left badly scarred bent turf. Such damaged areas should be repaired as soon as possible. If new sod is not available, the areas should be loosened up by spiking and the heavy mat of dead grass, if present, removed. After such treatment, the areas should be reseeded or healthy stolons dibbled in. This can be followed by light topdressing and fertilizing to encourage the grass to fill in as rapidly as possible.

WEED CONTROL WITH ARSENICALS: Experiments have shown that late August or early September is the time of year in which the chemical control of weeds in turf is most successful. The annuals, if killed at this time will not have a chance to go to seed, and seed of such weeds, already in the ground, will not be likely to germinate after the middle of August. Perennial weeds such as dandelions and plantains are still easily killed by chemicals at this time of year whereas the grass is much more resistant to injury than in the hot weather. Climatic conditions are generally most favorable in the fall for the vigorous growth of the turf grasses and killing the weeds now removes the competition to which they would otherwise be subjected.

To be used in the control of weeds in turf, chemicals must be more toxic to the weeds than to the turf grasses, so that the former are killed while the latter, if injured at all, are only temporarily burned. Of the various chemicals used in weed control to date, the arsenicals appear to be the most satisfactory and selective in their action. Either sodium arsenite or arsenic acid may be used. In applying them, however, it should be remembered that they are toxic to man and animals as well as to weeds and proper precautions should be observed by the workmen.

The number and rates of the treatments required are determined by the quantity of permanent turf grasses present and the kinds of weeds which predominate. On areas where considerable amounts of turf grasses are present, two or three spray treatments at the rate of 4 ounces to 1,000 square feet may be necessary to eradicate the perennials such as plantains and dandelions without seriously injuring the grass. If any one of the treatments is carried out during a spell of hot weather, the rate of application at that time should be reduced to 2 ounces to 1,000 square feet. Intervals between treatments vary from 10 days to 2 weeks depending on the speed of recovery of the weeds. Where crabgrass is the dominant weed, one such spray treatment may be sufficient with a possible second treatment on limited areas, should some of the crabgrass recover. In either case a heavy application of high-nitrogen fertilizer should follow the final application of the arsenical in order to stimulate the turf grasses and encourage them to fill in the bare areas left by the dead weeds. A uniformly vigorously growing turf next spring will be the best insurance against severe reinfestation of weeds next summer.

On areas heavily infested with crabgrass where little bluegrass is present, the arsenical treatment must be accompanied by reseeding as well as fertilizing. The turf should be mowed rather close and the proper seed mixture disced, spiked, or raked into the turf. The seeding should be followed immediately by fertilizing and then the chemical treatment. Either sodium arsenite or arsenic acid at the rate of 4 ounces to 1,000 square feet should be sufficient except where particularly heavy stands of crabgrass are present. In such areas an 8-ounce rate may be advisable.

If on such heavily infested areas, the turf weeds consist of a mixture of plantains, dandelions, and crabgrass an 8-ounce rate is recommended, accompanied by the reseeding and fertilizing program as described above. If the plantains and dandelions are particularly vigorous, two or three applications may be necessary, in which case the second and third treatments should be made at the 4-ounce rate and the reseeding and fertilizing should be carried out along with the last application of arsenical. In all cases the above rates are based on spray applications. If the arsenicals are to be applied in sand, the rates should be doubled.

It is to be expected that some variation in the rates suggested above will be necessary under some conditions. Preliminary small scale tests are usually advisable before large scale applications are made. The experience gained from such tests will reduce the possible danger of serious turf injury due to any peculiar local set of conditions, to errors in treatment, or to other causes.

P R O G R A M

ARLINGTON TURF GARDEN MEETING, SEPTEMBER 16-17, 1940

MONDAY

9 A.M. - 12:30 P.M. Review of experimental work now in progress which includes:
Comparison of resistance to disease and adverse conditions of many strains of Colonial and velvet bents, bluegrasses, fescues, and Bermuda grass.
Response of bent and bluegrass turf to different types of fertilizers.
Value of different fungicides for the control of turf diseases.
Durability of various organic materials in soil improvement.
Response of "stolon planted" grasses to various methods of planting and fertilizing.
Comparison of different herbicides for weed control.
Turf renovation by combining weed control, reseeding, and fertilizing practices.
Breeding of desirable types of bluegrasses and fescues.

12:30 - 1:30 P.M. Luncheon, Arlington Experiment Farm.

1:30 - 3:30 P.M. Reports of turf conditions from different districts.
Led by Ed B. Cale
Discussion of weather forecasting as an aid to the greenkeeper.
Speaker from U. S. Weather Bureau.
Biological control of the Japanese beetle.
R. T. White, Bureau of Entomology & Plant Quarantine, U.S.D.A.

3:30 - 6:00 P.M. Visit to turf experiments in National Capital Parks.
Rates of seeding and fertilizing in establishing grass.
Results with various grass seed mixtures.
Weed control plots.
Field plots on biological control of Japanese beetle.

7:00 P.M. Dinner - Hamilton Hotel.
Toastmaster: Fielding Wallace, Chairman, U. S. G. A. Green Section Committee.
Speakers: Dr. M. A. McCall, Asst. Chief, Bureau of Plant Industry, and Member, U. S. G. A. Green Section Committee.
John Gray, President, Greenkeeping Superintendents Assn.
Bobby Jones, Director, American Golf Institute.

TUESDAY

9 A.M. - 12:30 P.M. Visit to experimental plots on nearby golf courses.
Experimental greens in play.
Fairway fertilizer tests.
Fairway weed control.

12:30 - 1:30 P.M. Luncheon.

1:30 - 3:30 P.M. Continuation of regional reports and Round Table Discussion - Arlington.

3:30 - 5:00 P.M. Small group discussions of various turf maintenance problems.