

A.—The hen manure you have been mixing in your compost pile should give you a good grade of compost. Fresh hen droppings when applied to fairway turf are likely to burn if used in excess. By going over the fairways with a mat, as you suggest, it would be possible to break the material into finer particles, but you still might observe considerable burning. However, the grass would soon recover and you would get decided benefits from the manure. Probably you should make a trial of this material on a small scale until you have determined what

is a safe amount that can be used. We suggest that you apply it only at times when the grass is thoroughly dry and during cool weather, especially in early spring. If you could run the material through a shredder, you no doubt could distribute the material with less likelihood of burning. However, the cost would be greater and, after all, the small amount of burning you may experience may not be objectionable. There is also the likelihood of objections to the feathers and other litter on the course, but the final beneficial effect on the grass should offset this temporary inconvenience to the players.

Report of the 1937 Green Section Committee

FRANK M. HARDT, *Chairman*

DURING 1937 a large amount of correspondence was handled and many reports were made to member clubs on visits to courses and on materials submitted for examination, including samples of soils, grasses, fertilizers, seed, insects and peat. A considerable amount of technical information in literature was located for various clubs and organizations, and consultations were had with technical workers in the United States Department of Agriculture on special questions raised by club officials or through experimental work. Many conferences were held with greenkeepers and chairmen of green committees. A number of articles were prepared for golf magazines and publications interested in turf culture.

Dr. John Monteith, Jr., Chief of the Green Section staff, visited 59 clubs in 19 States from the Atlantic to the Pacific, attended the Fourth International Grassland Congress in Wales, and inspected turf improvement work in Europe.

During the visits to courses here a great variety of conditions requiring special attention were found, which included:

On Putting Greens

Problems arising from disease, insects, earthworms, rodents, weeds, poor physical condition of soil, layers of different materials, poor drainage, faulty watering methods, unsuitable grasses, improper fertilization, grain or nap, unsuitable topdressing methods, etc.

On Fairways and Tees

Problems arising from disease, insects, earthworms, rodents, weeds, poor or thin soil, faulty fertilizing practices, inadequate or excessive watering, unsuitable grass mixtures, poor drainage, etc.

Various tested methods for remedying the defects mentioned above were recommended. Ap-

proximately 2,000 letters were sent to member clubs with reports on courses visited, materials examined or methods advocated.

Experimental work at the Arlington turf garden was considerably expanded. The areas devoted to tests of various strains of putting green grasses as well as the old putting green fertilizer series which had to be abandoned a few years ago were planted again in the spring. A new series of plots was also planted to test the relative value of special strains of Kentucky bluegrass, fescue and rough bluegrass for use on tees and fairways. Another section was planted to test the merits of different strains of Bermuda grass and Zoysia grass. Experimental work on chemical weed-killers was continued this year at Arlington and on nearby golf courses. Experiments were conducted with new methods to destroy weed seed in compost.

Grasses

Various species and strains of grasses suitable for turf are tested at Arlington under comparable conditions. Most of these grasses were newly planted in turf this year and will have to be observed at least three years before we will feel safe in recommending them. The number of plots devoted to these tests is listed below:

Creeping bent	186
Velvet bent	117
Colonial bent	28
Kentucky bluegrass	48
Zoysia	25
Bermuda	8
Fescue	8
Poa trivialis	8
Timothy	2

430

In addition to the above plots, a co-operative test has been planted by our staff on a local golf

course using 11 of our most promising creeping bent strains. The test will enable us to observe them under actual playing conditions without any maintenance cost to us.

Grass nurseries have been established for growing the necessary supply of planting material and for the elementary test of many grasses. One large greenhouse unit has been placed at our disposal by the Bureau of Plant Industry for grass work. Last winter it was used and again this winter it will be used for speeding up the propagation of planting material of our most promising grasses. We have also supplied planting stock from our nurseries to numerous member clubs. The following different varieties and strains of grasses are grown in nurseries and greenhouse:

Fescue	83
Creeping bent	32
Kentucky bluegrass	38
Velvet bent	22
Poa trivialis	28
Zoysia	5
Bermuda	5
	213

Fertilizers

The effect of fertilizers on putting green and fairway turf is studied on 120 plots. This work includes not only observations as to immediate response of grass to fertilizers but also the effect of accumulations of harmful or beneficial residues of fertilizers or materials applied with them.

Weed Control

In response to increased interest in weed control with economical chemical methods, we have conducted 85 series of experiments at Arlington this year. Each of these tests involves from four to 100 plots with different treatments. A large number of samples of chemicals was prepared at Arlington for shipment to member clubs co-operating with us in these weed control investigations.

On many courses it is difficult to obtain weed-free topdressing for putting greens at reasonable cost. Therefore, this year we have conducted a number of experiments to develop more eco-

nomical methods for destroying weed seed in compost.

Disease Control

The amount of disease control work at Arlington had to be curtailed this year. Nevertheless, 48 plots were devoted to tests with different chemicals. Most of these plots received several treatments.

Soil Improvement

The soil improvement series, consisting of 50 plots, which was started several years ago, was continued this season.

The Green Section took part in a number of educational programs ranging from greenkeepers' short courses to informal gatherings of greenkeepers and others interested in turf maintenance. Such programs were held in Los Angeles, San Francisco, Portland, Seattle, Denver, Kansas City, St. Louis, Chicago, Lansing, Mich., Detroit, Cincinnati, Cleveland, Bridgeport, Conn., Albany and Tuckahoe, N. Y., New Brunswick, N. J., Haverford and Valley Forge, Pa., Baltimore and Washington.

A turf garden was planted at Atlanta, Ga., in co-operation with the Atlanta Athletic Club. The planting material for the garden was prepared at Arlington. The planting was supervised by us.

Since facilities at Arlington are not adequate nor sufficiently varied for all our tests and as some types of tests can be more economically handled on golf courses, we have conducted a large number of tests on golf courses in Washington and other cities. These tests include grasses, fertilizers and weed control methods.

In February, 1937, Mr. A. E. Rabbitt joined the Green Section staff, coming to us from the College of Agriculture of the University of Maryland. Mr. H. F. A. North, who joined our staff in 1936, left our organization in October to take up other activities. In October, Mr. John W. Bengtson, a recent graduate of the College of Agriculture of the University of Nebraska, was added to our staff.

Continuation of experimental work now under way is assured by the size of the Green Section Reserve Fund, which is composed of unexpended portions of annual appropriations by the Executive Committee to the Green Section.