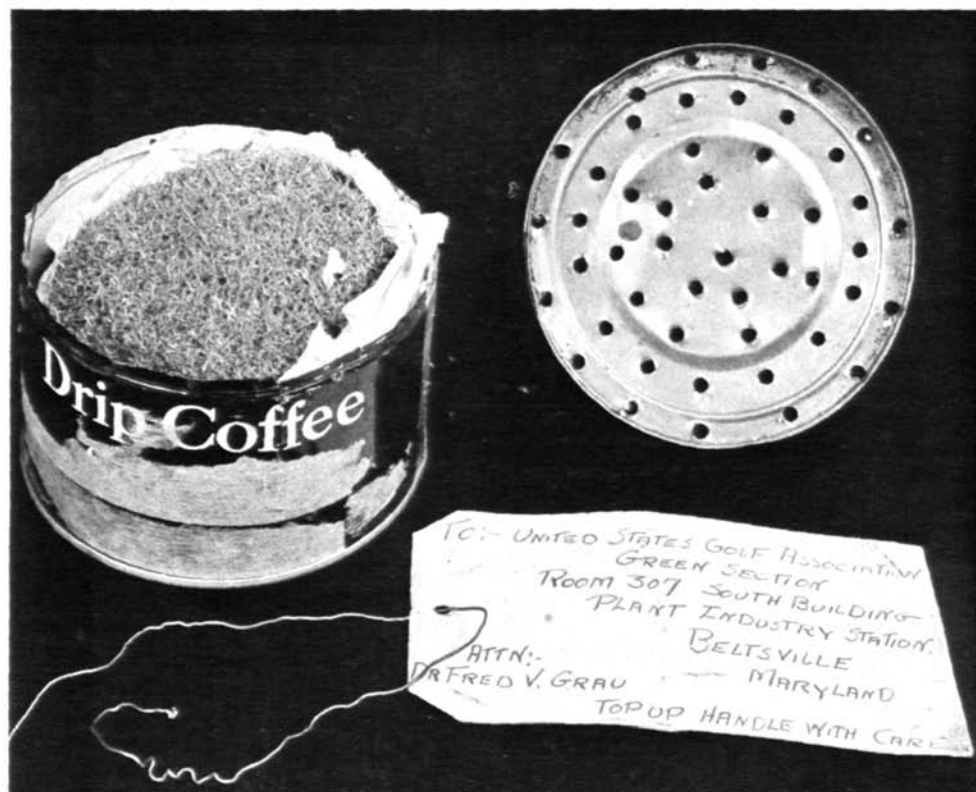


Turf Specimen Travels Intact in Unique Package



Bureau of Plant Industry, Soils and Agricultural Engineering—Photo by W. J. Mead

Bob Shearer, Park Hill Country Club, Denver, Colo., sent this plug of living turf to the Green Section. It arrived in perfect condition. The lid was punched and wired on. Absorbent paper held moisture and cushioned the plug against breakage. This package was designed by telephone in consultation with J. L. Haines, Denver C. C.

CONTROL OF ANTS IN TURF AND SOIL

BY JOHN C. SCHREAD AND GORDON C. CHAPMAN

FROM THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION BULLETIN 515, MAY, 1948

It appears from examination of results of the experiments that Chlordane is an efficient insecticide for the control of many species of ants. Not only will very small amounts of this insecticide destroy ant colonies present at the time of treatment, but the residual protection obtained in turf prevents reinfestation for a considerable period.

The spot-treatment method is applicable to turf areas where *Lasius* nests occur infrequently or at least not in great abundance. It is not expected that this method will prevent reinfestation for any considerable time. The closer together

treated nests occur, the more certainty there may be in obtaining reasonable residual protection from reinfestation over the entire turf area, especially when greens are watered following treatment.

After two weeks, retreatment may be necessary. One ounce of 50 per cent powder is sufficient to treat 150 nests, either by applying the treatment as a powder to the individual ant-hill and then watering it into the nest or by spraying a suspension directly into the nest.

The principle of the complete turf treatment method is to apply Chlordane in

COMING EVENTS

May 21-24—Joint Southern Turf Conference and Field Day, Tifton, Georgia, and Jacksonville, Florida. Ward Wood, Palm Beach, Fla., and G. W. Burton, Tifton, Ga.

May 27—Cleveland District Golf Association and Cleveland Golf Course Superintendents' Association meeting, Shaker Heights Country Club. Golf, dinner, meeting. Mal McLaren, Oakwood Country Club, Cleveland, Ohio.

Sept. 7-8—Turf Field Day for Greenkeepers, Rhode Island State College, Kingston. J. A. DeFrance.

Sept. 9—Lawn Turf Field Day, Rhode Island.

Sept. 19-20—Turf Field Day and Golf Tournament, Pennsylvania State College, State College, Pa. H. B. Musser.

Oct. 19—National Turf Field Day, Beltsville Turf Gardens, Plant Industry Station, Beltsville, Md., on U. S. 1, three miles north of College Park. Fred V. Grau.

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Feb. 20-23—Nineteenth Annual Turf Conference. Pennsylvania State College, State College, Pa. H. B. Musser.

Mar. 6-8—Midwest Regional Turf Conference, Purdue University, West Lafayette, Ind. G. O. Mott.

suspension to every square foot of golf-course green or other turf to be protected. Such procedure may be desirable when turf is heavily infested. Not only will this method result in complete extermination of the ant colonies in turf at the time of treatment but reasonably long protection from reinfestation can be expected.

Longest protection at the least cost was obtained when four ounces were used to each 1,000 square feet of turf. Using this concentration, ant colonies present at the time of treatment were completely destroyed and four to six

weeks freedom from reinfestation followed.

The cost of material for a single treatment for an 18-hole golf course with greens averaging 4,000 square feet in area would be about \$26. Treatment of all greens on a course (average green size: 4,000 square feet) three times, from May 1 to late August, should give ample protection from ant (*Lasius niger*) troubles for the season. Although we have not determined the minimum dose of Chlordane which causes injury to grass, four applications in one season have not caused any injuries in any of our experiments.

It is believed that if all areas of a green are treated, including the apron, sand traps, bunkers, fairways and rough for a radius of 50 feet or so around the green, reinvasion of the green proper could perhaps be prevented for a much longer time than four to six weeks.

It was observed throughout the season that bent greens treated with 50 per cent wettable Chlordane and fairways receiving applications of 5 per cent dust were generally distinguishable from untreated areas by the vigor of turf growth and deeper color of foliage. This remained obvious for a considerable time. The insecticide seems to have fungicidal properties; to just what extent, however, is not generally known. Golf-course greens having applications of one pound or more per 4,000 square feet were obviously resistant to severe outbreaks of brown-patch and dollarspot.

Chlordane is a quick-acting and effective toxicant when used as a control of the mound-building ant, *Formica exsectoides*. Small amounts of this material destroyed colonies varying in size from one to eight feet in diameter.

When sprayed into the soil around chrysanthemum plants at the rate of four ounces in 50 gallons of water, Chlordane controlled root aphids tended by ants as well as the ants.

Two additional species of ants, one constructing nests in lawns and the second working in grass-free soil at the base of shrubs, were destroyed when 50 per cent powder was fogged in.