

a sensitive, desirable vegetation. The esters may not give any trouble at all when used in cool weather, and we are not recommending the use of 2, 4-D in warm weather because we don't think that is the time from the standpoint of the growth of grass to recover, or the time to do the treating. If we treat in the summer we will knock out a lot of weeds, or even in the late spring, we get a heavy infestation of crab grass which is worse than the weed we started off with.

QUESTION: You mentioned applying 2, 4-D dry, with fertilizer, 600 pounds per acre; did you try to brush it in the grass or did you let it stay where it fell?

DR. MARTH: The fertilizer treatments were put on after all dew had evaporated from the grass and it was just applied dry.

QUESTION: You did not brush the grass?

DR. MARTH: No. We have applied it to the soil without touching the leaves of grass or weeds in greenhouses, and we find it is absorbed more readily into the ground than is the case when it is loose on top. Leaf applications have sometimes failed to give an effect; root applications have always given us an effect. The effect is more sustained.

QUESTION: How careful should we be of the men using the powder? Standing 10 ft. away from the spray, you can feel the effect in your nose.

DR. MARTH: The question is, what about the animal and human toxic effects? There have been quite a lot of experiments since the use of 2, 4-D has spread, on the effects on animals. Dr. Mitchell has experimented on this phase. We have had cows and sheep and we have given those animals massive doses of 2, 4-D and veterinarians have dissected the animals and tests have been run on the various parts of the animals and there have been no harmful effects as far as the livestock is concerned. One human has consumed 100 milligrams a day for 2 weeks without any adverse effects. There might be sensitivity, as you find with all individuals differing in form of allergies, but we haven't experienced those ourselves. Breathing dust, as you mention, of course, isn't too good.

GREENKEEPERS COMBINE ANNUAL NATIONAL TOURNAMENT AND PENN STATE MEETING

Annual national golf tournament of Greenkeeping Supts. Assn. of America this year will be held in conjunction with Pennsylvania Agricultural Experiment station's annual summer turf meeting at State College, Pa., Sept. 15 and 16.

The tournament has been growing as part of the GSA plan to encourage greenkeepers to take some time for playing golf in order that they may be thoroughly conversant with playing conditions.

MONDAY, SEPTEMBER 15

A.M. Golf Tournament (First round)

12:30 p.m. Luncheon, Nittany Lion Inn. Addresses: F. F. Lininger, Director Penna. Agr. Exp. Sta. and H. R. Albrecht, Head Dept. of Agronomy

2:00 p.m. Inspection of Turf Experiments

(1) Effect of Potash on Red Fescue, Kentucky Bluegrass and Creeping Bent—C. D. Jeffries

(2) Turf Quality Tests of Vegetated Creeping Bent Selections—H. B. Musser

(3) Turf Quality Tests of Seeded Species and Strains of Bent (Creeping, Colonial, Velvet)—H. B. Musser

(4) Species and Strain Tests for Lawn, Park, Fairway and Airport Turf—H. B. Musser

(5) Green Construction Experiment. Value of various physical conditioning materials (peat, vermiculite, etc.) used in the surface course, under different degrees of permeability of base course materials—F. G. Merkle

(6) Effect on fungicides, insecticides and herbicides on putting green bent turf—H. W. Thurston and H. B. Musser

(7) Commercial Seed Production of Creeping Red Fescue—H. B. Musser

TUESDAY, SEPTEMBER 16

A.M. GSA Golf Tournament (Second round)

Noon Luncheon, Nittany Lion Inn. Address and Award of Tournament Prizes by Carl P. Schott, Dean, School of Phys. Ed.

2:00 p.m. Inspection of Turf Experiments.

(1) Weed Control. (a) Comparisons of 2,4-D formulations on an established Kentucky Bluegrass-Red Top-White Clover turf. (b) Dry applications of clear 2,4-D acid and the sodium salt with fertilizer—H. B. Musser

(2) Fairway watering, clipping, compaction and fertilization tests—J. R. Watson, Jr.

(3) Nitrogen Availability Experiment—H. B. Musser

(4) Breeding Nurseries for Seed and Turf Production—(Red Fescue and Creeping Bent)—H. B. Musser

(5) Tests of New Fungicides—H. W. Thurston

(6) Fairway Weed Control and Aerification—J. R. Watson, Jr. and H. B. Musser

F. V. Grau, Director of USGA Green Section, also will participate in the discussions.