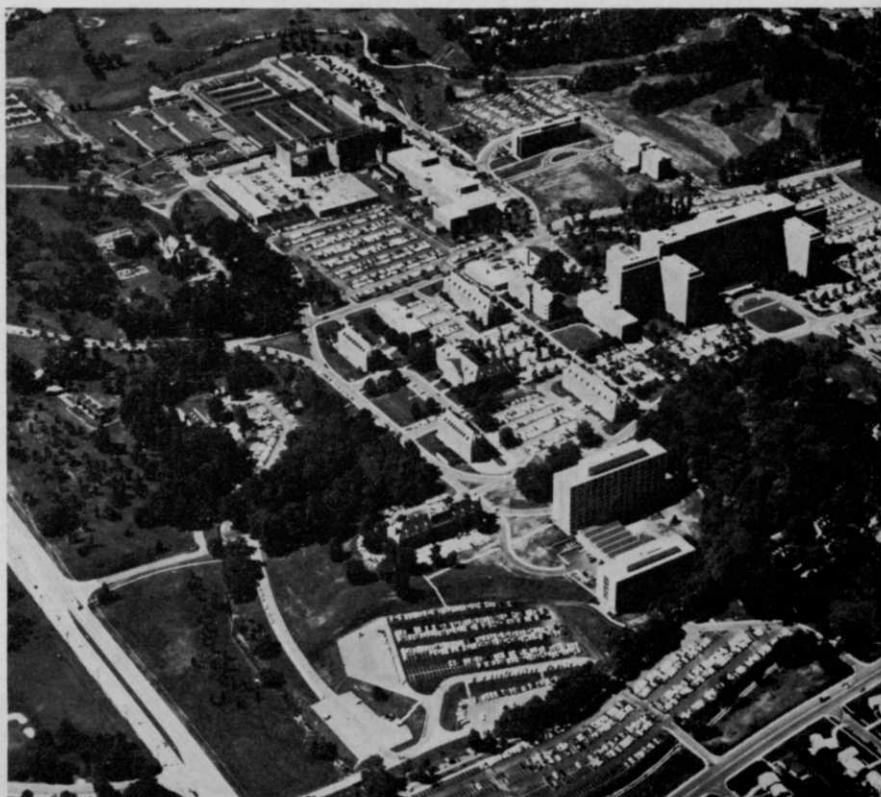


Midwinter Weed Control

useful
practice
for
National
Institutes
of Health

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The National Institutes of Health located on 306 acres of ground in Bethesda, Maryland conducts a program of animal research and clinical studies in its own laboratories and promotes medical research in other institutions through a program of grants and awards. There are a total of 48 buildings on the NIH "campus".

DURING the fall of 1965, conditions here at the National Institutes of Health were rather hectic, for the turf unit, of grounds maintenance section. Many of our turf areas were in very poor condition. A 5-year drought, along with more foot and vehicular traffic, had weak-

ened and compacted large sections of turf. An extensive building program had torn up other large areas. These factors favored weed growth over turf growth, and an intensive renovation program was in order. Unfortunately, the trees began shedding leaves early. Most

leaves were down by late November and had to be removed. Enough rain fell, and temperatures were moderate enough that mowing was continued until mid-December.

Because of these and other delays, the turf unit could not begin the fall herbicide program until after Christmas, and then only when the unpredictable Washington area weather permitted movement of spray equipment onto turf areas. Temperatures here normally fluctuate widely, in some cases, from 70°F to below freezing within a 24-hour period. There are enough days during winter, however, when temperatures are in the mid-30's and lower 40's to permit a modified weed control program to be carried out, provided that herbicides proved effective at these temperature ranges. The program was begun first week of January when frost was off the



Administration Building at the National Institutes of Health is surrounded by wealth of well maintained trees.

grass by 10:00 a.m. The soil beneath the turf was frozen fairly solid, so there was no damage from wheel ruts by sprayer or tractor. The sprayer used was an old but serviceable 300 gallon tank-type with three 8-foot booms which could be used separately in tree areas or all together in open areas to cover a 24-foot swath of turf. Pressure was found to be rather important, inasmuch as pressures much over 50 pounds created a drift problem, and anything much lower did not give good coverage between the fans of the spray nozzles.

It was decided to concentrate the control program on those species causing most concern here. The most troublesome winter weed pests at this location consist of smooth chickweed, mouse eared chickweed, clover, henbit, and ground ivy. Due to the late start for this program and the scarcity of suitable days for carrying it out, the scope of the operation was limited to those areas with heaviest infestations and where most obvious results could be noted.

Ten days after the first application, a light snow fell covering the area to a depth of one inch. This remained on the turf for several days. As the snow melted, the chickweed on treated turf areas turned bright yellow before shriveling and disappearing. The program was continued as weather permitted until early spring and, with the arrival of spring rains, a definite line between the treated and untreated areas proved success of the venture.

We decided to attempt a more general program during the winter of 1966-67. Plans were to cover the entire reservation or approximately 150 acres of turf area. Results to date in all phases of the operation have been quite good. The addition of dicamba to the spray mixture has given good kill on mouse-eared chickweed, henbit, and ground ivy which had shown some resistance to 2,4,5-TP alone at this time of year. No damage has been observed to any of the trees and shrubs on the grounds. It appears that a useful weed con-

trol program can be carried out in areas which are free of snow.

Two hand-propelled spreaders with a 4-foot coverage were purchased and used in more confined areas around shrub beds and narrow strips where it was not feasible to use the boom sprayer. This equipment covers by means of a revolving disk which slings the solution being used in a circle, rather than by pressure, and eliminates the drift problem found with pressure equipment. Results obtained with various weed species the previous winter also indicated the need for herbicide materials of more than one type, as well as a variety of concentrations. The 2,4,5-TP treatment was continued with spreader sticker in areas which covered the root zones of trees. The only change here was the addition of a wetting agent in small amounts, one ounce per tankful of solution in order to achieve better leaf penetration by the herbicide. In areas free of tree cover, a quarter pound of dicamba was added to one pound formulations of 2,4,5-TP per acre. Good results had been obtained with this combination during the summer where it had been used on knotweed and wild onions.

This program was started in December and continued as rapidly as conditions permitted. By late February the entire reservation had been covered by at least one application of spray.

With the approach of warm weather, some rather dramatic results were apparent. The only broadleaf weeds still remaining in our turf areas were those missed by the sprayers and seedlings which were just beginning to germinate, such as dandelions and plantains. Our grass benefitted by an early start and was well ahead of the winter weed horde. For areas where weather conditions permit use of equipment in winter months, this operation seems to be a useful tool in good turf maintenance.

(Ed. Note: Trade names are not permitted to be used by the National Institutes of Health. In the above instances Banvel-D (dicamba) and Silvex (2,4,5-TP) were the commercial chemicals used.)

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Survey on Turfgrass Management Training Series

WEEDS TREES AND TURF magazine is making available its series on Turfgrass Management Training which ran earlier this year. This series listed college level training available at 26 colleges and universities across the nation.

A number of universities have requested reprints for use with their own student counseling programs and for use by high school counselors.

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