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WEEDS TREES and TURF

FORMERLY WEEDS AND TURF

June 1967
Volume 6, No. 6

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Encourage Your Men to Grow

Gone are the days when a pat on the back and a turkey at Christmas will guarantee company loyalty and help you hold your employes.

Complimenting a man is old hat. You'll do a better job of reaching him and developing a sense of belonging if you assure him of his value to the organization. Consider your men who are at the foreman level. You expect them to be more knowledgeable about the business than they needed to be 25 years ago.

Nor is money the critical element in keeping men that it once was. Not that you can get by without paying good wages; you can't. There are too many good jobs for the capable man.

Employers agree that morale, especially at the foreman level, is vitally important. Some work at attaining it, others expend little effort in this direction, though morale doesn't happen because you are considered a fair employer who "pays pretty well."

We believe the most effective method of instilling loyalty and building a staff of longtime, steady foremen is by encouraging individual growth. Such growth can come in many ways besides experience on the job, valuable as this is.

Consider the value of sending one or more of your foremen to a short course in the field each year. Cost will be negligible, considering the experience gained through association with others in the field and in a firsthand study of technical material. Consider training courses sponsored by companies who supply your equipment or materials. Many have off-season training sessions offering specialized schooling. Encourage correspondence school training if available. Make a practice to send one or more foremen to state, regional or national meetings of the industry. Set up your own company-sponsored training sessions and call in guest specialists to handle them. Cost again will be negligible considering the value to your men. Finally, see that all foremen, and perhaps others, get the technical publications which fit your field. Having these at the office seldom benefits your foremen. They can't read on the job. See that they get the magazines at home.

When you hire a new employe, use your knowledge of men and mentally project how far he will be able to go in your organization. When you have a choice, pick the man with an open mind, capable of developing mature judgment. He's the type who will benefit from your program.

In short, develop company pride by encouraging individual growth. The payoff will be loyalty and better service to you and to your customers.

WEEDS TREES AND TURF is the national monthly magazine of urban/industrial vegetation maintenance, including turf management, weed and brush control, and tree care. Readers include "contract applicators," arborists, nurserymen, and supervisory personnel with highway departments, railways, utilities, golf courses, and similar areas where vegetation must be enhanced or controlled. While the editors welcome contributions by qualified freelance writers, unsolicited manuscripts, unaccompanied by stamped, self-addressed envelopes, cannot be returned.

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Survey '67:

Turfgrass Management Training, Part 3

From "brushup" short courses to two-year technical programs, from four-year undergraduate courses leading to B.S. degrees to research-oriented postgraduate studies, colleges around the country are stepping up their turfgrass management training programs in the face of heavy demand for graduates. On the following pages, and in coming issues, WTT surveys turfgrass programs and the specialists behind them. Final installment will appear in July.

Lake City Junior College, Lake City, Florida



Dr. James H. Thacker: Career opportunities are almost unlimited because of the rapid growth of the industry and the accompanying advance in technological developments.

Turfgrass and ornamental horticulture management programs have been developed through cooperation of colleges and industry representatives. A 2-year course is offered through the Technical Division of the College. Graduates are awarded an Associate of Science Degree in either Turfgrass Management or in Ornamental Horticulture.

Dr. James H. Thacker directs both the turfgrass and ornamental horticultural programs. Subjects of the turfgrass program center around establishment and maintenance of industrial and municipal parks, golf courses, cemeteries, road rights-of-way, and public and commercial building grounds. Specific subjects are turf growth and composition, insects and diseases, fertilization, and turf protection. Theory and technical knowledge are given in the classroom and actual performance of skills in the industry are carried out in both indoor and outdoor laboratories.

Enrollment for the program which was started last year consists of 9 day students with an additional 24 students taking night classes.

Requirement for admission is a high school education. Classes begin August 14 which is also the deadline for application. Tuition costs average about \$75 per term for local students, \$90 for other Florida students, and \$125 for out-of-state students. On-the-job training is a program requirement. The course is the only one of its type in the Southeast and was designed by industry and college personnel to meet the needs of industry for turf personnel according to Walter D. Anderson, executive secretary of the Florida Turfgrass Association.

Requests for information may be directed to Dr. James H. Thacker, Lake City Junior College, Lake City, Fla. 32055.

State University Agricultural and Technical College, Farmingdale, New York



Dr. Donald W. Griffiths, Jr.: Educators and industry leaders agree that there is a need for competent turfgrass specialists. They can satisfy this need only if they have young men aware of the situation.

Turf training at New York's State University Agricultural and Technical College, Farmingdale, is conducted by the Department of Ornamental Horticulture and is directed by Donald W. Griffiths, Jr., Associate Professor of Ornamental Horticulture.

Program offered is a two-year course leading to an Associate in Applied Science degree in ornamental horticulture with a major in turf management. A separate one-year vocational program is being planned for the near future. Two-year students study turfgrass culture and management, as well as design, horticulture, and arboriculture. Technical courses are supplemented with general education and basic science subjects. Students are required to gain on-the-job experience between the second and third semesters, and additional part-time work is recommended but not required.

Begun in 1966, the Farmingdale program has a first-year enrollment of 10, with a larger class expected for the second year. Courses in turf management and landscape development are taught by Griffiths, with many staff members cooperating in teaching allied subjects.

Requirement for admission to the program is high school graduation with a satisfactory record including math and science studies. Tuition for New York residents is \$400 per year; for nonresidents, \$600. Registration begins Sept. 11, 1967, and Sept. 9, 1968. Applications should be made at least six months in advance, though late applications may be accepted on the basis of student quotas, etc. For further details, write Director of Admissions, State University Agricultural and Technical College, Farmingdale, New York 11735.

Mississippi State University, State College, Mississippi



Dr. Coleman Y. Ward: At no time has there been greater demand for qualified graduates—the need far exceeds present or anticipated enrollment. I know of no area where there is greater opportunity.

Turf training is directed by the Agronomy Department and all turf courses are taught by the staff of the Agronomy Department. However, a joint major is offered by the Departments of Agronomy and Horticulture.

Dr. C. Y. Ward directs the turf research and teaching program. A turf management option offering a B.S. degree is offered by both the Agronomy and Horticultural departments. Emphasis on courses is split about equally between these two departments. Students may also take a Master's or Ph.D. degree in Agronomy Crops with the research program being in the field of turf management. Specific degrees offered for the undergraduate are Agronomy-Turf Management or Horticulture-Turf Management.

Teaching staff consists of Dr. Ward, Dr. Leyton Davis, and Jack E. Gary. The program, started in 1965, has 10 students enrolled with the selected option of Turf Management either in Horticulture or Agronomy. Three students are currently completing B.S. requirements and one is

graduating with a Master's degree. Some 3 to 5 students are expected to graduate annually over the next five years. Work in the field is encouraged. Working agreements with golf course superintendents exist for summer employment. Also, students may alternate school work with outside employment by attending classes during alternate semesters.

Tuition at the University is \$174 per semester which includes student activities and health service. The fall semester begins September 14. A slightly lower rate exists for the spring semester which begins February 2, 1968. An additional \$25 per semester is charged out-of-state students. Students who have completed work at an accredited high school or who transfer from a junior college are eligible. All are required to have taken the American College Test.

Requests for additional information may be directed to Dr. C. Y. Ward, Agronomy Crops, P.O. Box 5248, State College, Miss. 39762.

The University of Tennessee, Knoxville, Tennessee



Dr. L. M. Callahan: Graduates are in great demand for University research and Extension work and by industry in all areas.

Turf Training at the University of Tennessee is offered in the Department of Agronomy, and is directed by Dr. L. M. Callahan, Assistant Professor in Turfgrass Management.

Program offers graduate specialization in turf management at the M.S. and Ph.D. levels, with assistantships available for qualified students. A specialty course in turf management is offered at the senior (undergraduate) level, but also developed for juniors and graduate students. Subject areas covered include all aspects of turf management, such as soil fertility, fertilizers, soil chemistry, genetics, plant physiology, botany, plant pathology, entomology, landscape design, agricultural engineering, etc. Practical training is in-

cluded in this course, and on-the-job training is part of the graduate program.

Begun in 1964, Tennessee's graduate program is just getting underway, with the first graduate student currently completing his M.S. degree in turf management.

Requirement for entering the graduate turf program is established by the University. There is no tuition for Tennessee residents; nonresident tuition for course enrollment is \$150 per quarter. Requests for information regarding enrollment in the University should be addressed to the Dean of Admissions, University of Tennessee, Knoxville, Tenn. Inquiries on the turf management program can be sent to Dr. L. M. Callahan, Department of Agronomy, College of Agriculture, University of Tennessee, Knoxville.

Washington State University, Pullman, Washington



Dr. Roy L. Goss: Opportunities in the field are very good. We have a shortage of good trained personnel.

Turf training at Washington State University is the responsibility of the Agronomy Department, and is a cooperative effort among agronomy staff members.

Program offered is a four-year undergraduate course of study, leading to a B.S. in agronomy with a major in turf. In addition to general science, agronomy, and other required courses, students take the course in Turfgrass Culture, taught by Alvin G. Law. On-the-job training is not included as a requirement of the undergraduate program; however, it is encouraged.

Begun about 1948 in turf research, Washington State's program began offering training courses in 1953. There is still considerable emphasis on research, with Dr. Roy L. Goss and Dr. C. J. Gould de-

voting time to research in turf and turf diseases, respectively. Teaching is done at Pullman with most of the research being conducted at the Western Washington Research Station at Puyallup, Wash.

Requirement for entering the program is admission to the University. Tuition is \$105 per year for residents, and \$315 per year for nonresidents. In the fall of 1967, registration begins Sept. 25, and classes, Sept. 28. In the spring of 1968, registration will begin Feb. 8, and classes, Feb. 12. Early application is advised. Requests for information regarding degrees in turfgrass management (agronomy with turf major) should be directed to Mr. Alvin G. Law, Johnson Hall, Washington State University, Pullman, Wash.

Trained Graduates Can Cut Operating Costs



Dr. Madison

By JOHN H. MADISON

Associate Professor
Landscape Horticulture
University of California, Davis

Generally the horticultural industry is not willing to pay full value for the well-trained graduate, though he would pay his own way through savings made in operating expenses.

Turf managers today are worth more money than the common industry pay level. In many cases, they could be paid \$12,000 to \$18,000 yearly out of money wasted by inept construction plans. Few starting salaries are fair to the calibre of man graduating today in turfgrass or landscape management. You'll find plenty of jobs at the \$6,000 to \$8,000 level. Yet many employers would be both time and money ahead to pay the salary needed to attract better qualified people.

Our low pay philosophy drives many of our better men to competing fields. The effects then show up in industry shortcomings. Take the case of many almost new golf courses in California. Any number have at least one major construction mistake—the result of saving a few thousand dollars during planning and building. Poor planning and management are costly and the problem has been solved on the California courses only by reconstruction. Parts of courses have been rebuilt in the first five years at costs of up to \$100,000 and more. Less objection seems to stem from spending \$50,000 on rebuilding than an extra \$5,000 in the beginning.

Golf courses have plenty of

company when assessing rebuilding costs. Most of the big athletic arenas recently built in California have had turf problems. Hundreds of schools building athletic fields have settled for inadequate irrigation systems. Often they have also spent money on unneeded soil amendments—rather than putting money into the fertilizer needed to give them decent turf.

Extra Costs Seldom Recognized By Industry

These and similar cases entail extra costs to the public, most of which go unrecognized. Practically all are caused by making wrong choices, poor design, and compromising on specifications. Research personnel who have the answers can only help during the rebuilding stage. They are reluctant to establish rigid guidelines because there is usually a flexibility of choice. Thus the calibre of the turf manager is most important in positions where he develops and carries out an effective and efficient construction plan.

Yet despite these needs, the graduate turf manager does not enjoy a labor market willing to pay adequately for his services. Too often, a substandard salary is offered.

Most consistent job opportunities today for our California graduates are in park adminis-

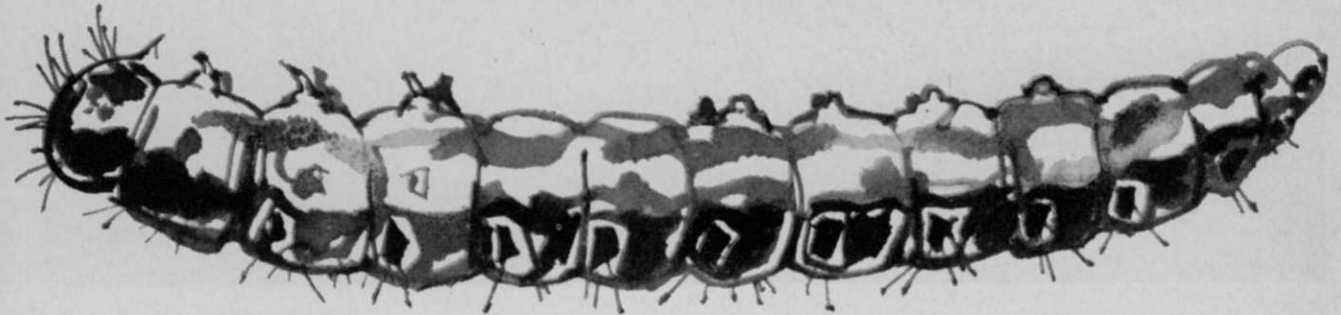
tration. We have placed students—based on their interests—in parks, in nurseries; with landscape contractors, golf course builders and landscape architects; helped them find positions as plant breeders, arborists, teachers, golf superintendents, floriculturists, garden writers, and as principal personnel in botanic gardens and arboreta; in laboratories, and in service and sales positions.

Personally, I feel that a prime future opportunity exists in a new form of golf course management. Surprisingly, many golf clubs of successful businessmen lack good business management. I think a void will be filled when some turf graduate leases equipment to, and contracts for maintenance services to several golf courses in one area. This can provide better maintenance and management at lower costs to the course, and at the same time provide good income to the manager.

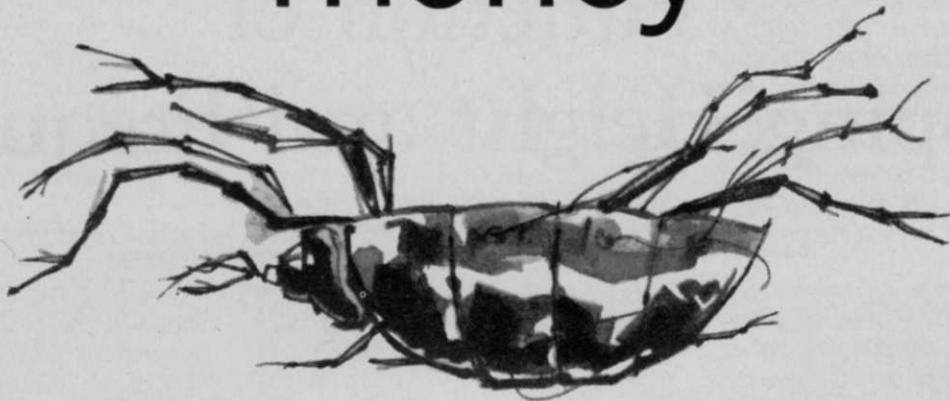
By way of summary, I believe the sophisticated nature of turfgrass management today will lead to a recognition of the qualified manager. We need trained men to make correct choices during planning and construction—to prevent mistakes and accompanying waste and to eliminate costly rebuilding. When the value of highly trained men is more widely recognized, we will attract a new calibre of leadership to the turf industry.



3 for the



money



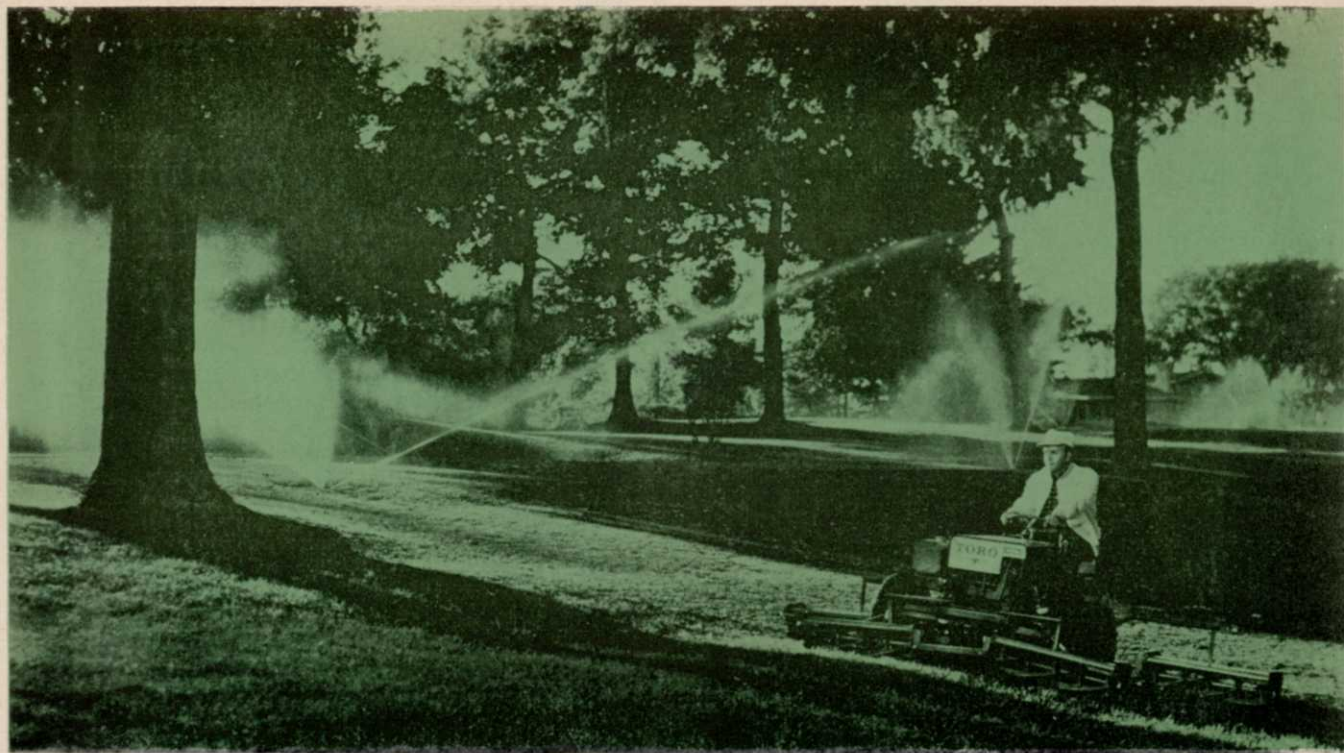
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Watering Practices As A Function of Clipping Height and Frequency

BY J. R. WATSON

Director, Agronomy, Toro Manufacturing Corporation, Minneapolis, Minnesota

TURFGRASS watering practices are determined by a number of factors. Clipping height and mowing frequency may be among the more important agronomic influences. Others include the kind of grass, soil conditions and climate—length of growing season, distribution and amount of rainfall and evapotranspiration. The degree of color and the growth rate required to maintain the grass in the condition necessary to meet the demands of play, or other use, for which the turfgrass is grown, are important in determining watering practices. So likewise the capability of the irrigation system and, in the case of manually operated systems, the availability of labor exert a major influence on scheduling

and execution of watering programs.

There is very little documented information dealing with water use rates as affected by clipping height and frequency. It seems likely that evaporation and transpiration will be greater on a dense, closely clipped turfgrass area such as a putting green than will be the case on a more open turf cut at a height of two to three inches. If such is the case, then water requirements will be affected directly by clipping height and frequency.

Juska and Associates at Michigan State and at Beltsville, Maryland; Davis at Ohio State, Roberts at Iowa State and Madison at the University of California, Davis, all have shown

there is a reduction in root growth of a given species as a result of decreasing heights of cut. This, obviously, has a very direct effect on watering practices since maintenance of root zone moisture is one basic consideration of all sound watering programs. Hence, the frequency, rate of application and the amount of water applied at each irrigation are a function of clipping height and frequency.

Pertinent to a discussion of watering practices as a function of clipping height and frequency, is a short review of the role of water in plant growth, the influence of soil properties on root growth and the effect of mowing on grasses.

Water is essential to plant growth and activity and is in-