

values as temperatures became more favorable. It is clearly evident, however, that the delay of mowing by one week did not adversely affect the turf in previously covered plots. The detrimental effect of earlier mowing on open plots on April 15 was similar to the reduction suffered by covered plots.

While significant differences still persisted between fertilizer treatments, relative differences became smaller as the season progressed. The effect of the cover also diminished with time.

Summary

Late fall nitrogen fertilization and protective covers strongly affected the time and intensiveness of spring recovery of bentgrass putting green turf in tests conducted in Rhode Island during the winters 1967-68 and 1968-69. Cover strongly enhanced turf quality early in the year, but the effect diminished slowly as the season progressed.

Fertilizer treatments variably intensified the cover effect depending on source and application rate. Of the fertilizer sources tested, activated sludge at four pounds N/1,000 square feet consistently gave the best results, especially early in the season. It was followed closely by the two pounds N rate, but urea at one and two pounds N/1,000 square feet gave similar results. A mixture of 75 per cent ureaform and 25 per

cent urea at two and four pounds N/1,000 square feet gave somewhat poorer results. Ureaform (UF) alone, at the same rates, was ineffective in producing the desired early results. UF did not produce a significant response until the normal growing season was well under way.

Timing of cover removal was critical. Subsequent management requirements of the putting surface depended on proper timing. The cover should be removed early enough to avoid overstimulation of succulent foliage, yet late enough to escape cold weather injury. Removing the cover a few days too early is better than removing it too late!

Mowing should be delayed for several days following removal of the cover so that the turf can acclimate to the open environment (higher light intensity and greater moisture as well as temperature differentials). No apparent damage is sustained with delayed mowing, and the turf continues to develop normally.

Two winters of testing did not produce a clear picture relative to snowmold incidence in conjunction with late fall fertilization, protective cover and snowmold fungicides. What can be stated is that the cover has no apparent influence on snowmold occurrence. Preventive snowmold fungicides should be applied as usual prior to covering of the turf in fall or early winter.

The Two Year Turfgrass Management Program At Michigan State

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QUESTION: Who needs college training in turfgrass management?

ANSWER: Young men preparing for responsible managerial or sales positions within the turfgrass industry.

The purpose of Michigan State University's Two-Year Turfgrass Management Program is to provide the fundamental technical knowledge and skills required to enter the turfgrass industry. Graduates are well qualified to serve as assistant golf course superintendents, superintendents of smaller golf courses or in other turf positions. Four-year degree programs

offer a broader and deeper training in the sciences and humanities, but fewer specific skills. The choice of program depends on the individual. The specific occupational goal, academic interest and ability, and financial resources should be considered. Students who graduate with a B average or better may transfer to a four-year degree program if they wish.

MSU's Institute of Agricultural Technology and the Department of Crop and Soil Sciences administer the Two-Year Turfgrass Management Program with the cooperation of other subject matter departments. The program begins in mid-September with two terms of academic training. Six months of placement training begins in mid-March. The last two terms of classroom training are completed from mid-Sep-

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tember to mid-March.

Academic Program

Three courses in turfgrass management are taught by the coordinator. In Turfgrasses and Their Use, the adaptation and culture of turfgrass species and varieties, vegetative identification, and weed control principles are taught. In Principles of Turf Culture the effects of light, water, temperature, and air are studied. In Turf Practices, cultural systems for golf courses and other types of turf are studied. Dr. James B. Beard and other outstanding turf men are invited to speak to the turf seminar class. The coordinator also serves as faculty advisor to the students.

Dr. Paul Rieke teaches Basic Soil Science and Turf Soils and Fertilizers. Soil texture, structure, moisture, temperature, modification and fertility are studied.

Courses in Agricultural Biochemistry, Basic Plant Science, Arboriculture, Insect Pests and Insecticides and Plant Diseases are required. Dr. Joe Vargas, turfgrass pathologist, teaches the plant diseases course.

Courses in Landscape Equipment, Small Engine Operation, Irrigation and Drainage, and Applied Mathematics are taught by Agricultural Engineering professors.

Business methods are taught in Accounting, Personnel Practices, and Business Management. Elective courses in business law, salesmanship, financial and credit practices, and psychology are available. Two writing and speaking courses aid in improving communications skills.

Maintenance of Gardens and Grounds is a popular elective. Courses in landscaping are also offered.

Placement Training

Carefully supervised work experience is important. One-third of the program is spent on placement training. The trainee should be taught to perform every turfgrass maintenance task. The reasons for the particular tasks or program should be explained and discussed. The trainee is a paid laborer and is expected to be an outstanding workman. Many trainees are given occasional opportunities to supervise small work crews. Approximately 90% of our students take their placement training on golf courses. The superintendent bears the major responsibility in providing good on-the-job training and in return gets satisfaction for helping a young man develop his talents.

The student decides on a placement training position after a few interviews and discussion with Dr. K. T. Payne, Coordinator of the program. The final decision on hiring is made by the employer. Monthly reports giving hours on each type of work and skills learned, plus a report describing the turfgrass management

program for the season is required of the student. Placement training visits are made by the coordinator. Placement training may be taken outside of Michigan. Placement training at locations managed by close relatives is not allowed.

Entrance Requirements, Tuition, And Other Costs

High school graduation or successful work experience with a recommendation from the employer is the minimum requirement for admission. Most students enter after high school, but many have had some previous college training, or are veterans. Turf work experience before entering the program is strongly recommended. Encouragement from their employers is an important reason for most students entering the program.

Tuition is \$13 per credit for Michigan residents (\$31 for out-of-state residents) at this time. The average course load is 17 credits per term.

Room and Board in MSU dormitories costs \$325 per term. Books and supplies cost about \$60 per term. Entertainment, travel, and other expenses vary with the individual. The program meets requirements for Veterans Administration benefits.

Campus Life

Living on MSU's large, well-landscaped campus is a tremendous experience. Ag tech students are assigned throughout the various dormitories, which gives the students an opportunity to meet others with various interests and backgrounds. Most dormitory complexes are co-educational; that is, women in one wing and men in the other with central cafeterias, grills, and lounges. Many cultural and movie programs, intramural athletics, spectator sports events, Forest Akers Golf Course, the MSU Turfgrass Club, Associated Students of Ag Tech, and various other student clubs and activities are available to ag. tech students. Sometimes it is difficult for students to remember that studies deserve first priority.

Rewards

The average starting salary for graduates is over \$7,500. Most graduates start as assistant superintendents or superintendents of small golf courses. Advancement can be rapid for the man who increases his managerial skills through good experience and continuing self-education.

The support that golf course superintendents and others in the turfgrass industry have given the program since it was initiated in 1966 is greatly appreciated. We expect the graduates will make outstanding contributions to the turfgrass industry in the years ahead.