

These men complete course offered by the Univ. of Mass. in its 19th Annual ten weeks Winter School for Greenkeepers. (L to R) Back row: D. Marrone, Wachusett CC; L. Peck, Battle Creek CC; Prof. Geoffrey Cornish; C. Hamilton, Concord CC; Joe Gerlak, Windham CC; Prof. Zak; Alvin Moore, St. Johnsbury CC; Prof. Dickinson. Middle row: E. Wohlfeill, Green Acres GC; M. Pannozzo, Farmington CC; L. Dziedzic, Pequabuck CC; S. Clapper, The Clapper Co.; C. Sowerby, Marlboro CC; D. P. Denison, Roanoke CC; L. St. Pierre, Tatnuck CC; J. Paul, Indian Hill CC. Front row: G. Tedesco, Wayland CC; D. Ajemian, Hiawatha GC; R. Hess, Brookside CC; J. Davis, Riverside GC; Director Verbeck; J. Donadio, Mohawk Valley CC; A. Mallucci, Silver Springs CC.

## 250 Attend Univ. of Mass. Annual Turf Conference

By Geoffrey Cornish

Dr. Ralph Van Meter, Pres. of the Univ. of Mass., welcomed 250 turf growers to the Annual Turf Conference held at the Univ., March 10-11-12, 1949.

The Conference was held in conjunction with the final exercises of the 19th Annual ten weeks Winter School for Greenkeepers. Those attending came from New England, New York, New Jersey, Delaware, Virginia, Michigan, Wisconsin, and Pennsylvania.

The program was arranged by the Section of Agrostology of the Department of Agronomy cooperating with the Mass. Section of the New England Turf Association under the general chairmanship of Prof. Lawrence S. Dickinson and G. Cornish of the Section of Agrostology, assisted by Phil Cassidy, Pres. of the Greenkeepers Club of New England, E. V. Pyle of the Hartford Park Dept. and Homer C. Darling, Pres. of the New England Turf Assn.

Director R. H. Verbeck of the Stockbridge School of Agri. presented certificates to members of the Winter School who had successfully completed the ten weeks Winter School.

Papers presented at the Conference are outlined hereunder in the order that they appeared on the program.

### Taking Notes at Conventions

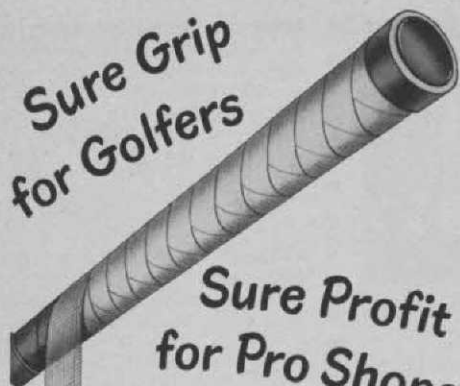
Despite modern recorders and excellent presentations of lectures in golfing maga-

zines, there is still a vital necessity for retaining the art of note-taking. Robert S. Hopkins, Dean of Men, Univ. of Mass., first gave some instructions concerning proper note-taking. He then presented a short lecture on the history and organization of the Univ. of Mass. requesting that listeners take notes in accordance with his previous instructions. Following his short lecture, he gave out the solution in the form of printed sheets to show the ideal set of notes for the lecture, asking that each person in the audience compare it with his own. Many found they profited considerably by this exercise in note-taking.

### Plant Water Relations

Dr. T. T. Kozlowski, Dept. of Botany, Univ. of Mass., stated that more plants died prematurely from lack of water than from any other cause. He discussed the role of water in the growth of turf grasses, explaining the use of water and its method of entry, translocation and loss by transpiration from the plant, the magnitude of root growth of grasses, and the actual amount of water lost by different plant communities by transpiration. Dr. Kozlowski showed slides of the anatomy of roots, stem and leaves of grasses. Microscopic sections of leaves were shown to illustrate internal structure and the stomatal apparatus. He dealt with the dynamics of transpiration, guttation, secretion and bleeding. The factors relating to midday watering were dealt with and the possibility of having sun scald from free water

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on the surface and in the soil were discussed. In regard to sun scald, Dr. Kozlowski considered that the high concentration of carbon dioxide arising from free water resulted in decreased absorption of water, and since transpiration rates are still high, the grass may suffer from desiccation of the tops. Tip burns due to guttation and the consequent concentration of salts on leaves were mentioned. The mechanics of water absorption were discussed and the beneficial effect of good soil aeration was emphasized.

#### Insect Control in Turf

Dr. J. C. Schread, Conn. Agri. Experiment Station, described the magnitude of the insect world. He then stated that a great many insects caused damage of one sort or another. He discussed the inroads that the Japanese Beetle Grub has made in turf and stated that the Japanese Beetle was now known in 24 states. Each year the summer rainfall has a profound influence on the grub population. Dr. Schread gave rates for the use of insecticides on turf and showed a number of illustrative slides.

#### Maintenance of Turf Traffic Areas

Professor Dickinson stated that turf traffic areas are found on all types of lawns including cemetery, park and golf course turf. There are two traffic areas in turf growing. The pre-seeding and post seeding. He described how traffic areas arise and stated that more attention to certain fundamental principles in construction and maintenance would prevent much of this trouble. He then gave recommendations for dealing with this condition.

#### Turf Experiments at Univ. of Mass.

The Univ. of Mass., pioneer in turf culture, provides the most comprehensive turf education program of any university.

The Massachusetts Section of the New England Turf Association working closely with the Section of Agrostology and the Experiment Station has made it possible to resume turf research on this campus.

In 1948, a practice putting green was built on the campus for experimental work and in 1949, a number of other turf areas are to be constructed. Research projects started in 1948 include a study of different fungicides for snow mold prevention, work on *Zoysia's japonica*, the control of clover by nitrogen and the use of spent hops as an organic amendment. Other projects planned to start in 1949 include a study of fertilizer requirements of grass by analysis of the leaves, effect of too frequent aeration, a study of the height of cut, the frequency of mowing, applications of phosphorus to turf, and the use of lime to counteract snow mold. It is intended also to make studies of various lawn seed mixtures on the market in Massachusetts

and of different mowing equipment.

Cornish recognized a number of men outside the University including Homer Darling, Orville Clapper, Arthur Anderson, John Counsell, Elliot Rogers, and William and Henry Mitchell who had been very active in formation of the Turf Association and re-establishment of turf research at the University of Massachusetts.

#### Soil Physics in Relation to Plant Growth

Dr. Fred Grau, Director, U.S.G.A. Green Section, explained principles of soil physics showing their effects on turf. He discussed formation of soil granules by cementing of particles with organic matter. Dr. Grau emphasized water conservation as being an absolutely necessary philosophy and he stated that often 80% of water applied to turf is wasted. Gravitational water in soil decreased absorption and brings about dessication of the tops. Also, when intercellular space of plants becomes flooded, fungus attacks become more severe. He spoke of the bad effects of compaction and thatch. Sometimes a sand or layer beneath the surface results in an interface which prevents root penetration.

Thatching stops root growth. Aeration is necessary to break up the thatch. Dr. Grau emphasized good aeration and good drainage for some distance into the soil to cut down compaction and to break up impervious layers. Dr. Grau showed slides of abused turf areas throughout the United States.

#### Facts About Velvet Bent

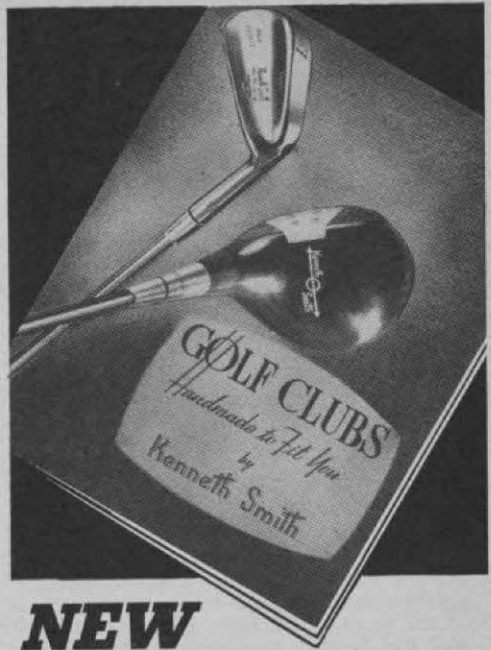
Dr. Jesse DeFrance, Rhode Island Agricultural Experiment Station, dealt at length with the characteristics and adaptation of velvet bent. He listed a number of prominent greenkeepers who grow it, and stated that it was indeed a grass worthy of consideration.

#### Factors Influencing Availability of Phosphorus

Dr. Dale Sieling, Head, Agronomy Dept., Univ. of Mass., explained how phosphorus applied to soil may be fixed before it can be utilized by plants. He stated that compounds of iron and aluminum are responsible for this fixation. Phosphorus fixation has been the subject of considerable research at the University. An understanding of the mechanism by which phosphate is fixed by iron and aluminum will facilitate more efficient practices in handling it. Dr. Sieling stated that it has been found that certain organic substances will prevent fixation and also liberate the phosphorus that has been fixed.

#### Maintenance Problems Here and There

Dr. O. J. Noer, Agronomist, Milwaukee Sewerage Commission, showed a set of interesting slides illustrating use and abuse of turf throughout the United States and Canada. He discussed the chlorotic condi-



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tion of velvet bent and recommended the use of ferrous sulfate to counteract it. He showed pictures of snow mold in greens and the effect of faulty construction. One picture showed Washington Bent tees at the Milwaukee Country Club.

### Turf the Golfer Wants

Francis Ouimet, Captain of the Walker Cup Team and former U. S. Open and U. S. Amateur champion, described turf the golfer wants. Mr. Ouimet spoke of ideal conditions for growing turf in Great Britain and described a number of courses in that country on which he had played. Mr. Ouimet listed heights of cut the U.S. G.A. expects for fairways and greens. He contrasted lies obtained on watered and non-watered fairways. He described the difference in turf today and that of 30 years ago.

### Today's Player Specifications for Golfing and Factors That Must Be Understood to Meet Them

Professor Dickinson listed the actual and cultural costs that are to be expected in conversion of a course to meet another set of player specifications. He stated that it was a fact that the player conception of golf has changed greatly during the past two years.

These recent severe player demands on course condition make it imperative that

club members and in particular club officials, course superintendents and professionals, should understand the cultural and financial costs and change in necessary maintenance policies before major expenditures become necessary.

### New England PGA Tees Off on Season

New England PGA held its annual spring meeting and equipment demonstration at Hotel Statler, Boston, April 13, in conjunction with Massachusetts's GA session.

Pros thronged exhibition hall. Tom Mahan said actual sales reported for the day were \$50,000, not a record figure but considered good because of earlier ordering due to season getting under way unusually soon and boys being back on their jobs early.

Dinner was attended by more than 460. Horton Smith made a constructive address and Byron Nelson put on a very well received demonstration and instruction clinic.

Particular attention was paid by pros to study of increase of sales volume by featuring style element in shoes and apparel. White, green and cherry red Good-year lug sole golf shoes with correspondingly colored tops were shown in men and women's numbers as a new style item.

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