Diversity of the turfgrass industry was evidenced by this gathering of Minnesota conferees. Left to right are John Kinkead, National Mower Co., St. Paul; George Bock, a maintenance superintendent from Robbinsdale; Andrew Windsperger, a school grounds supervisor, also from Robinsdale; and Carl Wiebold, head engineer and maintenance supervisor, Mapleton Schools, Mapleton, Minn.

Share Your "Secrets," Experts Urge 300 Turf Pros at Minnesota Course

By JOSEPHINE B. NELSON
Extension Assistant Editor, Institute of Agriculture
University of Minnesota, St. Paul

"Share your mistakes, your successes, your secrets."

That was the gist of the advice given to turf managers by Ray Keen, Professor of Horticulture at Kansas State University, Manhattan, during the University of Minnesota's first Turf Management Short Course on March 17.

The short course was attended by some 300 people professionally interested in the care and management of turf for golf courses, sodding, parks, institutional grounds, and recreational areas. D. B. White, Assistant Professor of Horticultural Science at the University of Minnesota, was program coordinator.

"Mistakes in the art of maintenance can be fatal — to the grass at least," Keen told the turf managers. "We don't have time to make all the mistakes that can be made. Share your mistakes with others. Confession is good for the soul and the pocketbook in mistakes avoided. A wise man learns from the mistakes of others. That's why, if you share your mistakes, your successes, your secrets, you'll find your profession and your professional status will both grow!"

Mutual turfgrass problems were discussed by delegates George Rostron (left) of Shorewood Nursery in Excelsior and T. Geron Bell, park superintendent, North St. Paul.

Seedbed Preparation: First Step to Good Turf

Proper seedbed preparation for turf seeding or sodding requires advance planning, according to George Blake, a professor in the Department of Soil Science at the University of Minnesota.

There are great risks to spring and summer plowing of fine-textured soils, Blake told the turf managers. The decision to plow and plant spots in early spring that were tromped out the year before usually results in a seedbed that is poor in structure and that puddles with the first rains. Although sandy soils can be tilled almost any time, clay soils will be best for seeding if they are plowed in the fall. If spring seeding is not feasible, a green manure crop plowed under in midsummer will keep the seedbed in good condition for late summer seeding.

Before preparing a seedbed for large areas, give attention to drainage, surface leveling or grading, to lime where needed, and to fertilizer needs, Blake advised. Calcium from lime and phosphorus are the two elements that move very slowly in the soil and are best added before tilling and worked into the seedbed.

If the soil is tilled when it is too wet, great damage can be done to the seedbed. Seedbed preparation when the soil is at the proper moisture content is essential to a good seedbed.

Special soil mixtures may be needed in spots where there is a great deal of traffic. These can be specified only after the sand, soil and peat ingredients are tested and the mixture quantities specified.

Science and industry combined brains in this meeting between Edward Frederick (left), superintendent of the Southern School of Agriculture and Experiment Station, Waseca, Minn., and Charles Lenhart, St. Paul sales rep for the Toro Co.

Seeding Techniques

In discussing the hows and wherefores of seeding and sodding, Professor White recommended seeding grasses at the following rates:

Bluegrasses—2-3 lbs./1,000 sq. ft.

Creeping red fescues—3-5 lbs./1,000 sq. ft.

Bluegrass-creeping red fescue mixtures—3-4 lbs./1,000 sq. ft. Ryegrass should make up no more than 10% of the mixture.

Mix seed well before sowing. If you sow by hand, divide the seed into four equal lots. Sow

Know Your Species

Common Ragweed
(Ambrosia artemisiifolia)

Common ragweed (left) is an annual, reproducing by seed only. It is widespread throughout North America in fields and waste places. Each fall, ragweed produces large stocks of irritating pollen which contribute to the suffering of "hay fever" victims. A second species, giant ragweed *(Ambrosia trifida)* (right) is also an annual and an equally bothersome pollen producer. Giant ragweed has large, hairy, three-lobed leaves; common ragweed has hairy, multilobed leaves, each with a distinct midrib.

Stems are similar in both species: coarse, rough, and hairy. Giant ragweed has stiffer hairs. Height of common ragweed seldom exceeds 4 feet, but giant ragweed can attain 18 feet in moist fertile soil. Mature woody stems and stubble of both species persist into the following spring.

Flowers are unisexual in both species, that is, male and female flowers are found separately on the same plant. Tiny light-green male flowers, which produce pollen, are found in alternating rows on terminal portions of stems. Rows of male flowers are about 6 inches long. Inconspicuous female flowers are found where the leaves join the stems and at forks in stems near the tops of each plant.

Seeds are enclosed in a woody hull ⅛ inch long. Hulls are ridged with blunt spines surrounding the seed tip. Roots of both species are easily pulled from soil since they are annuals. Roots are classed as taproots.

A third species, perennial or western ragweed, *A. psilostachya*, is a common inhabitant in the Mississippi Valley and westward. It is distinguished from common ragweed mainly by its spreading rootstalks, its occurrence in dense patches, and its finely divided, lobed leaves. It also seldom exceeds two feet height. Flowers and seeds are somewhat similar to other ragweeds.

All of these ragweed species can be controlled effectively with 2,4-D while they are in the fast-growing stage before midsummer. Repeat applications may be necessary. Later attempts at control are unsuccessful because stems become increasingly woody. All three species are susceptible to semi-permanent soil-applied herbicides.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland.

(DRAWING FROM NORTH CENTRAL REGIONAL PUBLICATION NO. 36, USDA EXTENSION SERVICE)

each lot in a different direction.

For sowing mechanically, divide the seed into two lots and sow in two directions perpendicular to each other.

If seed is drilled, it should be drilled in at least three directions. Approximately 10% of the seed should be showing after the seed is covered.

When rolling seed in, do it with a light roller only, White advised. If it is a water-tank roller, it should be no more than a third full.

An area to be sodded should be prepared in the same manner as a seedbed. Sod should be laid across a slope and staked as needed. Joints should be staggered.

If peat sod is used, work some peat into the topsoil before laying the sod.

After it is laid, sod should be soaked and then watered well for three weeks or until it is well knit to the soil.

Fertilizer Tips

The highly soluble forms of nitrogen and potash are easily leached from the soil and will burn when improperly applied at high rates, R. S. Farnham, Assistant Professor of Soil Science at the University, warned the group.

Slow-release or controlled-availability fertilizers are relatively new and offer many advantages over the conventional-type fertilizers used on turf grass. Among the advantages of slow-release fertilizers are: (1) a single application may be sufficient; (2) they will never burn if improperly applied; (3) they release plant nutrients when needed; (4) they give uniform grass growth instead of periodic flush periods of growth; (5) they result in less leaching; and (6) they can be stored better.

Slow-release fertilizers for turf include both the organic and inorganic types. Sewage sludge and ammoniated peats are natural organic forms and the synthetics include forms of

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Classifieds

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds and Turf, 1900 Euclid Avenue, Cleveland, Ohio 44115.

Rates: "Position Wanted" 5c per word, minimum $2.00. All other classifications, 10c per word, minimum $2.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment.

HELP WANTED

OUR COMPANY is now operating in termite and pest control. We wish to expand into weed control, turf maintenance, tree care, etc. If you qualify to form and manage this new department, kindly give education details, experience, reference and personal data. Write Box 512, Havertown, Pa.

MISCELLANEOUS

TO EMPLOYERS who advertise for men! The letters you receive in answer to your advertisements in WEEDS and TURF are submitted by each of the applicants with the hope of securing the position offered. When there are many applicants it frequently happens that the only letters acknowledged are those of promising candidates. (Others do not receive the slightest indication that their letters have even been received, much less given any consideration.) These men often become discouraged, will not respond to future advertisements and sometimes even question if they are bonafide. We can guarantee that *every advertisement printed in* WEEDS and TURF *is duly authorized.* Now won't you help keep our readers interested in this advertising by acknowledging every application received, even if you only return the letters of unsuccessful applicants to them marked, say, "Position filled, thank you"? If you don't care to reveal your identity mail them in plain envelopes. We suggest this in a spirit of helpful cooperation between employers and the men replying to Help Wanted advertisements. Put yourself in the place of the other fellow.

New Lawn Food Is Introduced

Nutro F/85 Turf Food, a new, high-nitrogen turf fertilizer, is being offered for the first time this spring by the Smith-Douglass Co.

It is also reported that Nutro F/85 has a "disciplined" feeding ability that makes grass green up fast, yet keeps it that way for weeks. It can be applied dry, or as a water-soluble solution. For details write Smith-Douglass Co., Norfolk, Va.

Tough Weeds Easily Destroyed

Persistent weeds in noncrop areas are now being controlled with a new group of herbicides. Researchers at General Chemical Div., Allied Chemical Corp., say that the herbicides attack weeds through the root systems, giving long-term control.

The weedkillers, new formulations of Urox, are applicable for industrial sites, railroads, highways, and other noncrop areas. According to the company, Urox 'J' is adapted for destroying Bermudagrass, crabgrass, and Johnsongrass. Urox 'D' is aimed at most annual and perennial grasses and broadleaved weeds.

Hard-to-kill grasses such as quackgrass and broomsedge are targets for Urox 'H'. For more details write the company at 40 Rector St., New York, N. Y. 10006.

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urea-formaldehyde produced by chemical companies.

Special slow-release nitrogen compounds and coated soluble fertilizers are inorganic types. Many of these slow-release fertilizers are still in the experimental stage but some may be available soon. The sewage sludge and urea-formaldehyde types are presently available and are widely used on turf.

Annual applications of nitrogen, phosphorus, and potassium are needed for vigorous growth of turf. Because of the high nitrogen requirement of turf relative to phosphorus and potassium, and because of high leaching losses and other losses of soluble nitrogen from the soil, this element should be applied in excess amounts. Often two to four times as much nitrogen should be applied as phosphorus and potassium, particularly where grass clippings are removed, as on a golf green. Fertilizer grades such as 20-5-10, 16-8-8, or 20-10-10 are commonly preferred. Supplemental nitrogen may be applied as a liquid or solid any time during the season as needed.

Proper fertilization promotes healthy and vigorous grass and helps produce a desirable color; aids in preventing diseases and in controlling competing weeds; and minimizes damage from extended drouth periods, Farnham said.

— Advertisers —

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Trans-A-Tainer Collapsible

A variation of its Quik-Bin package has been developed by the U.S. Bulk Handling & Container Co. Called the Trans-A-Tainer, the new product has a built-in pallet base. The upper part, which is collapsible, is of weather-resistant material that gives protection to dry, flowable products such as fertilizers, pesticides, etc., the firm maintains.

The company reports that five Trans-A-Tainers, when collapsed, require a storage area 60 inches high and 44 inches square. For details write the firm at 333 North Michigan Ave., Chicago 1, Ill.