

# BETTER LAWN

PUBLISHED PERIODICALLY BY THE NEWS BUREAU OF  
BETTER LAWN & TURF INSTITUTE



# Harvests

ROUTE 4, KIMBERDALE

MARYSVILLE, OHIO 43040

Volume 11, No. 3

October, 1964

## NORTHWEST BLUEGRASS ASSOCIATION BEING ORGANIZED

Following up decisions by the Board of Directors at the annual meeting, the initial step towards organization of a Northwest Bluegrass Association was undertaken in Portland, Oregon in late June. A meeting called through the good offices and generous cooperation of Jim Carnes, Albert Dickinson, was attended by more than 20 prominent handlers of bluegrass, representing according to estimates 65% of the northwestern crop. Several others unable to be there expressed their enthusiasm by telephone or letter. Bluegrass growers and handlers were on hand from eastern Washington and eastern Oregon, as well as the more immediately accessible western slope.

After a delicious meal in the spacious Hilton quarters, the group heard from Dr. Schery about how the Lawn Institute was organized, its present status, and the program it undertakes. With domestic bluegrass production shifting from the Midwest to the Northwest, interest on the part of the Northwest Association is largely in assuming responsibilities for the educational and promotional efforts of the Lawn Institute, long underwritten by the midwestern firms. It was generally agreed that this program is very worthwhile, and a need in this modern age of merchandising. Lengthy discussion ensued as to how such an organization might function, and what percentage might be set aside on sales for supporting the Lawn Institute's efforts.

It was agreed that all attending would "carry the message" back to their producing areas, and that an organizational effort would be undertaken as soon as feasible. Mr. James Carnes of Albert Dickinson, and Mr. E. L. Hollingshead of Northrup, King were voted a "committee" to proceed with further organizational efforts of a formal nature. The Lawn Institute has promised to aid in every way possible, and nearly three pounds of literature was fired back special delivery to each man attending this charter meeting.

Those present for the kick-off session were: Art Chamness, Chamness Seed, Madras, Oregon; Dan McKeiman, Pomeroy Seeds, Pomeroy, Washington; Bob Peterson, Northrup, King & Co., Albany, Oregon; Joe Jacob, Pacific Supply Coop, Portland, Oregon; Stanley Fagg, Northrup, King & Co., Fresno, California; Jack Herman, Northrup, King & Co., Albany, Oregon; R. H. Stark, Albert Dickinson Co., Moses Lake, Washington; Tom DeArmond, Albert Dickinson Co., Halsey, Oregon; Gordon Jones, Hubbard Seed and Supply, Hubbard, Oregon; Henry A. Aitken, Albert Dickinson Co., Quincy, Washington; R. E. Clark, Round Butte Seed Growers, Culver, Oregon; Darcy W. Sater, H. L. Wagner & Sons, Inc., Imbler, Oregon; Ted Freeman, Pacific Supply Coop, Madras, Oregon;

Larry McKennon, Great Western Seed Co., Albany, Oregon; Gus Hagglund, Pacific Supply Coop, Portland, Oregon; James W. Jenks, Jr., Jenks-White Seed Co., Salem, Oregon; Clarence E. Argyle, Pomeroy Seeds, Inc., Pomeroy, Washington; W. A. Vollstedt, Vollstedt Seed Co., Albany, Oregon; E. L. Hollingshead, Northrup, King & Co., Albany, Oregon; J. L. Carnes, Albert Dickinson Co., Halsey, Oregon; Lee McFarland, Pacific Supply Coop, Portland, Oregon.

"Attending" by telephone or correspondence were: Arnie Bonnicksen, Washington Cooperative Farmers Assn., Seattle, Washington; Arden Jacklin, Jacklin Seed Co., Dishman, Washington; Howard Jenks, Jenks-White Seed Co., Salem, Oregon.

#### LOUISIANA TURFGRASS CONFERENCE HEARS ABOUT WINTERSEEDING

Dr. Schery was invited as featured speaker of the Louisiana Turfgrass Conference, held August 5-6 on the Louisiana State University campus. Subject of the presentation was "Seeds For Southern Turfs," emphasizing especially the usage of bluegrass-fine fescue-Highland bentgrass mixtures for winterseeding in the South. It was also possible to distribute numerous reprints relating to winterseeding, and to show slides of seed producing areas in the Midwest and in Oregon. A portion of the presentation was devoted to quality in lawn seed, patterned somewhat after the paper prepared for the Rutgers Turfgrass Conference earlier in the year.

Louisiana has not undertaken a great deal of turfgrass research itself. The audience, consisting largely of golf course superintendents, was hungry for information. The superintendents seemed especially appreciative of a bird's-eye view on winterseeding, derived from the Lawn Institute's coverage in the last several winters of winterseeding from Florida to Arizona. Extensive work has been done both by the University of Florida and Mississippi State University, to which experimental seed has been sent for cooperators there.

Earlier in the program, Dr. J. M. Peeke of the Southwestern Louisiana University had spoken on "Classification of Grasses," while a panel of superintendents discussed "Mixtures Versus Single Species For Overseeding Golf Greens." Staff members covered "Insect Control" and "Turf Herbicides." There was some equipment and product display. The second invited speaker, in addition to Dr. Schery, was Mr. Stan Frederickson of Mallinckrodt, St. Louis, who spoke upon "The Year-Around Turf Disease Prevention Program."

#### SCHERY SPEAKS AT MISSOURI TURFGRASS CONFERENCE

Dr. Schery presented to the 5th Annual Missouri Turfgrass Conference in mid-September, "The Lawn Seed Sweepstakes." He also participated in panel discussions on the second day of the conference.

"Lawn Seed Sweepstakes" reviewed what are the quality features in lawn seed, and how under present day industry standards there is very little chance of poor mechanical quality. Under the new labeling, it is also relatively easy to determine appropriateness of grass species in a mixture. The chief uncertainty remaining is what inclusions may pass as "crop," some of the haygrasses that do not require separate listing being worse than weeds often times. Charts were shown summarizing seed analysis of several hundred seed lots chosen at random;

nearly half contained no weeds, and a great majority of the remainder contained species that were of little consequence (even though some must by law be classed "weeds"). Kentucky bluegrass, fine fescues and the bentgrasses were outstanding for general lack of contamination, although not as much could be said for some of the haygrasses and especially redtop. Imported seed was noted to frequently contain both *Poa trivialis* and *Poa annua*. Slides depicted seed production, and the performance of seeded grasses under test. Some of the varieties such as Merion and Park bluegrasses have accumulated performance information sufficient to enable judgement; so have most commercial fescue varieties, and bentgrasses such as Highland.

#### MISSOURI TURFGRASS CONFERENCE

The 5th Annual Lawn & Turf Conference, University of Missouri, was held September 23 and 24. A well-rounded program was presented, by staff members and invited speakers. Subject coverage included soil tests, warm-season grasses in Missouri, bermuda disease, care of equipment, the economics of disease control, lawn seed, watering, fertilizers, insects, and weed control. Field tours emphasized crabgrass prevention, general weed control, trial grass plantings, and golf course management. Clinics or panels discussed management problems, technical developments, and identification of weeds and grasses.

Dr. Schery's presentation is reviewed briefly elsewhere, and it is impossible to summarize all talks here. It was evident that considerable interest exists in the lawn service business, and that the business aspects are of as much concern as is the technical information.

No strikingly new technical developments were reported at the conference, although experience with Tupersan is encouraging, at least to the extent that it does not seem to interfere with the sprouting of desirable grasses when used at planting time. There was no indicated change in the ranking of crabgrass preventers, Zytron and Dacthal remaining among the more effective, and Betasan showing promise. In inspection of the field plots, Chlordane for the prevention of crabgrass seemed to have caused browning of bluegrass! There was reported an instance of good goosegrass control in bentgrass, without injury to the bent, with Betasan. Combinations of 2,4-D, particularly with Silvex or Dicamba, seemed effective in controlling a wide range of broadleaf weeds.

Ellis Graham, speaking on Missouri soils, indicated that the river bottom soils were excellent for raising grass, containing about 2½% organic matter, with pH above 5, and slight deficiencies in phosphorus and potassium. He showed in slides that nitrogen fertilization without supplementary phosphorus may thin stands of bluegrass. Also the advantage of liming.

Spring dead spot continues to make serious inroads on vegetative bermuda planted in Missouri for golf course fairways. The causal organism is not yet convincingly identified, but is suspected to be a *Helminthosporium*. Damage occurs in autumn, although not manifest until spring; sprays after January do little good. In the "dead spot" area bermuda roots turn black and wither, and the spot will not be recolonized by bermuda (although weeds seem to have little difficulty growing there). A carbamate spray offered by Mallinckrodt is reported effective in reducing incidence of spring dead spot.

### BOOST FOR BLUEGRASS

Members will be interested in a report appearing in the September Golfdom, about the heavy loss of turf (principally mixed *Poa annua*), during the recent dry summer. The story indicates that the disaster reached emergency proportions in many areas.

But there may be a silver lining for quality seed interests. One proposal by Jim Holmes, of the USGA Greens Section, was to return to Kentucky bluegrass fairways. Holmes feels that with modern aids it is possible to maintain bluegrass at a lower clipping height than formerly. But it will take an educational campaign. A quote from the Joe Doan article may be of interest to members:

"Jim Holmes contended, however, that bluegrass can be maintained at a 1-inch cut and thus gives practically as good lies as the *Poa*-bent mixture. What is needed, he added, is a campaign to convince golfers that a changeover to bluegrass can be made without causing any deterioration to speak of in playing conditions."

### RESEARCH AT KANSAS STATE UNIVERSITY

Dr. Schery made an enjoyable visit to Kansas State University July 15, for discussions with Dr. Ray Keen, and inspection of the turfgrass research plantings. Dr. Schery also spoke to the summer turfgrass class at the university, the students enrolled being chiefly county agents and teachers. There was opportunity for considerable give-and-take discussion, especially concerning the merits of tall fescue in a climate that is marginal for good performance of fine fescues and Kentucky bluegrass.

In the experimental grounds there are 44 hundred-foot plots representing a wide selection of bluegrasses and fine fescues. Many of these are derived from seed furnished Dr. Keen previously (and so is considerable acreage of natural Kentucky bluegrass, now used mainly for pesticide research). At the time of visit, July 15, all bluegrasses and fine fescues seemed in exceptionally good shape, in spite of very hot weather and a persistent blistering wind. Keen was quick to point out, however, that the "men would be separated from the boys" as hot weather persisted into August. The plots are, of course, irrigated.

Work continues at the university towards selection of fine fescues that may be resistant to summer conditions. Some selections have been made, and are still being observed, but are not considered ready yet for release. Keen indicated that the Pennlawn, Illahee, Rainier and other fine fescues widely marketed don't hold up as well as he would like through summer. Although they looked good at time of visit, he reports that most years they suffer severely from *Helminthosporium*. We hope to have a report from Dr. Keen later in summer, on this year's experience.

Main selection work in Kansas has been with bermudagrass, and at least one, of proven winter-hardiness and vigor, is ready for release. Centipedegrass from Woodward, Oklahoma has proven quite hardy. St. augustine, on the other hand, has consistently died out in winter. Royal Cape, a *Cynodon transvaalensis*, is being observed, and is supposed to be an introduction of terrific golf green value. The Tufcote bermudagrass, introduced from South Africa, survived last winter well, and seems quite vigorous.

Bluegrass and fine fescue plantings were mostly made in the autumn of 1963. In the Kansas climate Keen says autumn is the only feasible seeding time, and is "worth a year's advantage" compared to waiting for spring seeding.

#### GOOD SUMMER AT KANSAS STATE

Dr. Ray Keen, Institute advisor at Kansas State University, promised to report on summer survival of the lush assemblage of bluegrasses and fine fescues seen at Manhattan in early July. It was freely predicted that Kansas' summer weather would soon "separate the men from the boys."

Now Dr. Keen writes: "(We) were wrong on the effect of the hot weather on our bluegrasses and fescues. I'm still scratching my head trying to figure out what happened. - - There has been very little loss of grass in the bluegrass and fescue plots - - not more than two spots in any of the creeping fescues. - - As of today, most of the plots rate 7, 8 or 9 on the 0-9 scale (9 highest)."

It looks as though the bluegrasses and fine fescues out-foxed the experts this year. Normally they don't survive the Kansas summer this adequately.

#### RUTGERS RESEARCH IMPRESSIVE

Dr. Schery spent a day visiting with the research and extension workers at Rutgers University. Dr. Reed Funk now devotes full time to turfgrass (formerly corn breeding), and has accumulated an impressive group of "parent" selections for recombination attempts. At present, most screening is for mowing height, fertility level and irrigation. Disease (leaf spot) is said of high enough incidence at 3/4 inch cut to not need inoculation. Among present selections are many privately developed in this country and abroad. Those ranking well include Penn State K-547, Merion, the Anheuser strain from St. Louis and Campus (European).

It is felt that many fertilizer recommendations are based upon generalizations or habit, rather than actual turf needs. With fairways turf, for example, most fertilization practices do nothing to increase survival qualities of the turf, the main need there. It is recognized that for hot weather, a frequent cause of demise is too high a level of nitrogen. On the New Jersey soils, potash deficiency seems infrequent, and its need in fertilizers not easily evident.

Bentgrass turf that had been "pampered" with watering and fungicide treatment proved weaker than equivalent turf not so benefited, when the treatment was withdrawn. Is this soil toxification, changed structure, or natural selection of weaker types under protection? Residual toxicity of chemicals in the soil is giving some concern. Chlordane treatment years old (crabgrass control), show definite and persistent thinning of the turf.

Reduction of bentgrass in mixed turfs through mechanical means (height of mowing, fertility level, time of thinning, etc.); fungicide-irrigation-fertility combination for bentgrass; ryegrass breeding (a stoloniferous ryegrass has been developed) are among current studies. No new "breakthroughs" are reported in herbicides, fertilizers or fungicides.

## 1964 PURDUE TURF CONFERENCE

The Midwest Regional Turf Conference, under Bill Daniel, Purdue University, is one of the oldest and most expansive in the country. 580 attended the 1964 Conference, and the presentations were quite diffuse. Scanning the contents as reported, one wonders if there aren't disadvantages in bigness, "the forest becoming obscured by the trees." This year there were items so far afield as America's image abroad, on parliamentary procedure, and on taking pictures.

Purdue research is rather casually reported in the Proceedings. Work continues in searching for bluegrass varieties, of petite sorts for lawns and fairways, aggressive sorts for roadsides. Midwest zoysia and Evansville creeping bent have been released. Perennial ryegrass is being given closer scrutiny. There is no foolproof answer to *Poa annua*, yet. Interest continues in the laying of heating cables in the soil, for improved appearance in cold weather.

An almost unbelievable series of steps was taken in planting the Purdue stadium, involving a multitude of soil preparations, drainage and other steps. Midwest zoysia is being plugged in, alternated with bluegrass plantings and overseeding (Merion, Delta, Newport). But evidently *Poa annua* has been an extreme problem, and now a high level of arsenic is being built up to forestall this encroachment.

Scanning the various papers, which review subjects as diverse as theoretical plant physiology to practicalities of turf maintenance, may stimulate ideas useful on the local scene. By and large the data presented is not new, and the condensations (as reported in the Proceedings) too epitomized to be of much scientific value. Nevertheless, the Purdue Conferences are a landmark in the interest they have stimulated, and in setting example by which abstruse information can be funneled out to those able to make practical use of it.

## WINTERSEEDING STUDY

An outstanding research report, "An Evaluation Of Overseeding Procedures For Southern Lawns," became available in June, the printed thesis of William James Gill, for Master of Science degree, Mississippi State University. The 60-odd pages of this thesis represent the most concentrated study on winterseeding which has come to our attention. The conclusions are comprehensive, and well documented. Mr. Gill and the University staff, are to be congratulated for a useful, thorough-going investigation.

Members of the Lawn Institute will be interested, in that both the Lawn Institute and the Oregon Fine Fescue Commission receive credit in the acknowledgements. Seed employed in portions of this study was furnished gratis the last two winters. A good bit of the factual detail will be useful in publicizing winterseeding with northern grasses, with conclusions generally favorable to fine fescues and Kentucky bluegrass.

Sample bits of information or quotes from the thesis may be of interest:

"Damage to the permanent turfgrass was more severe on plots overseeded with common ryegrass - -; while several varieties of Creeping red fescue - - did little damage to the permanent turfgrass." "Schmidt states that although the *Agrostis*

species - - germinate quickly, they do not grow well during the fall; but, they do provide good growth in the spring and early summer months."

The Lawn Institute mix is referred to repeatedly through the study, and is identified in the footnote as Pennlawn fescue, 59.88%; Kentucky bluegrass, 29.94%; Highland bentgrass, 10.18%. Actually, the fescue component contained Chewings as well as Pennlawn, and the Kentucky bluegrass included both natural and Park.

"Kentucky bluegrass plots had a higher number of plants per square foot than Illahee fescue and ryegrass plots which were not significantly different from each other."

"Temperatures as low as 0° F. were recorded. As a result ryegrass stands were greatly reduced by 'winterkill.' Illahee fescue and Kentucky bluegrass withstood the low temperatures without noticeable damage."

"Turf quality ratings listed - - indicate that ryegrass plots were equally damaged by low temperatures over all three sods. Illahee fescue plots did not increase in turf quality during the period from December 3 - - until March 2 - -. Kentucky bluegrass plots made the most growth during this period and produced higher turf quality ratings in March as compared to December."

"Illahee fescue was most constant in turf quality throughout the winter while Kentucky bluegrass made most of its growth and produced its highest quality turf in the spring."

"Ormond bermudagrass sods were not noticeably damaged by the overseeding treatments; however, zoysia Matrella sod was damaged by numerous treatments."

"The damage to the permanent turf by sod preparation treatment was not severe enough to significantly reduce the stand of the permanent turf."

"Both ryegrass and Illahee fescue plots were producing a desirable winter turf on November 25; - -."

"Ryegrass plots have been injured by low temperatures and a marked reduction in turf quality was recorded."

"Ryegrass was not as winter hardy as Illahee fescue and the lower temperatures of late November, December and January reduced turf quality."

" - - plots overseeded with Park bluegrass in a mixture had a significantly higher number of plants per square foot than plots seeded with ryegrass or Illahee fescue."

"Ryegrass was superior to all other grasses on November 21, 1963, but on February 10, ryegrass produced the lowest turf quality rating, being significantly lower than Illahee fescue. This would indicate that ryegrass was damaged more by the low temperatures."

Table 27 compares Illahee fescue, Park bluegrass, ryegrass, and the Lawn Institute mix, at three seeding rates, sown into mowed and unmowed turf. Very obvious is the better performance of all seed types when seeded into turf that has been mowed.

At a low seeding rate, Illhaee fescue and the Lawn Institute mix were rated most highly, and at high seeding rate, Illahee fescue was first, followed by the Lawn Institute mix. Data in this table certainly indicates that a fine fescue, or a mixture containing a fine fescue, can give a first-rate performance when used for southern winterseeding, equal to or better than ryegrass.

"Highland bentgrass alone did not produce satisfactory turf quality at any time." The Highland germinated reasonably well, but seedling vigor was poor after germination.

As part of the general conclusions we read: - " - - common ryegrass at 10 lbs./M or Illahee fescue at 5 lbs./M provided a satisfactory winter lawn when overseeded on U-3 bermudagrass, Ormond bermudagrass and zoysia Matrella sods." - - "Illahee fescue and Kentucky bluegrass were damaged very little by low temperatures and were superior in turf quality to common ryegrass in the spring." - - "Turf quality of plots receiving high and medium rates of seeding were superior to the low rate of seeding. Mowing to 1 inch prior to seeding significantly increased the turf quality of the four cool-season grasses - -." - "Of the four cool-season grasses used in a seeding rate study, common ryegrass, Illahee fescue and the Lawn Institute mixture gave satisfactory winter turf quality while overseeded at the medium or high seeding."

#### MEN'S GARDEN CLUB PRESENTATION

Charles Ross, Ashland, Ohio Men's Garden Club, asked Dr. Schery to speak before his club August 10. An interested and enthusiastic audience resulted from excellent advance publicity by the club, including mailings to the membership and two columns of publicity in the Ashland Times-Gazette August 8 ("Lawn Authority To Speak Here"). Colored slides were shown, and informational reprints distributed.

An interesting switch occurred when the program chairman introduced the audience to the speaker, rather than vice versa; each person was asked to stand up and quickly state his profession (but not his name). This wrinkle indicates for the speaker the diversity and background of his audience. The range existed from a college president and comptroller of a major firm to garden center operators and a minister. This variation in personal background indicates the tremendous common interest drawing power of gardening. It should represent great underlying strength for the lawn and garden products industry.

#### LOOSE PARK HAS LAWN EVENING

Dr. John Baumgardt, Executive Director of the Kansas City Garden Center at Loose Park, scheduled a "Lawn Evening" for his group, at which Dr. Schery was featured speaker. This appearance, which has become almost annual, experienced a "standing room only" crowd, and a switchboard full of inquiries during the day. This attests both to the high interest in lawns in Kansas City, and to the effective preliminary arrangements by Dr. Baumgardt.



#### DR. SCHERY TALKS TO MEN'S GARDEN CLUB

Dr. Schery presented a program on lawns to the Men's Garden Club of Kansas City on July 13. The talk emphasized trends within the seed industry, with slides depicting production areas in the Midwest and in Oregon. Weed specimens brought in by the members were identified, and means discussed for turning weedy lawns into good bluegrass-fescue turfs in the marginal Kansas City climate. Reprints were distributed to attendees.

#### MODERN GARDEN CENTER FEATURE

The August issue of Modern Garden Center featured six pages with several photographs on a lawn story done by Dr. Schery. The front cover also carried a Lawn Institute photo. After a general introduction, a question-answer style format was used to inform dealers on such key questions as "When is a bluegrass lawn best planted?" and "What makes for quality in lawn seed?". Reprints were offered to members.

#### MAILINGS TO THE SOUTH

During September 386 envelopes of a collection of winterseeding stories were sent to newspapers, editors and correspondents in the South. The influence of hurricane Dora is hard to predict. Certainly while the winds were blowing interest in winterseeding would be scant. On the other hand, the aftermath of destruction might require immediate steps at beautification for the winter season ahead, demanding increased planting of winter seed.

#### FLORIDA VISITOR

Dr. Evert Burt, Plantation Experiment Station, Florida, dropped by the Lawn Institute office while on vacation. He has been quite interested in the winterseeding mixture sent him for experimentation, and is quite pleased with it as well as the Institute releases. Dr. Burt's "no mow" bermuda has survived one winter on the Lawn Institute grounds, a gratifying performance for a variety from the deep South.

#### PLANS AHEAD FOR THE INSTITUTE

President Mangelsdorf talked about forthcoming plans for Institute meetings during a recent get-together in St. Louis. Because of the wide dispersal of directors and members, it has been the custom to limit formal meetings. However, many directors attend the Western meeting in Kansas City each November, and customarily a brief get-together is arranged then. Last year the Western offered opportunity for acquainting the north Europeans with the Institute and some of the domestic attitudes. President Mangelsdorf anticipates there will be a sufficient number of directors present at the Western this year to make at least an "Executive Committee" meeting worthwhile.

### BOZELL & JACOBS CLOSES KANSAS CITY OFFICE

For several years Lawn Institute services were handled through the Bozell & Jacobs office in Kansas City, most recently under the leadership of Milton Stephan, Office Manager. This summer Mr. Stephan regretfully informed us that the branch office in Kansas City would close August 1. Mr. Stephan has kindly re-routed to Marysville Institute communications addressed to the Kansas City office (press kits bore a Kansas City return address). Harvests will continue for the time being to be deuplicated by hired services in Kansas City. So, presumably, will the spring press kits, for which the mailing list and the production routine are well established in Kansas City.

### OREGON VISIT

In conjunction with the expected creation of a Northwest Bluegrass Association, Dr. Schery made a quick visit to the Willamette Valley in June. Through the good offices of the Highland Bentgrass and Fine Fescue Commissions, a joint luncheon was arranged, attended by several commissioners and representatives of these groups. A few words by Dr. Schery, and give-and-take discussions around the luncheon table, served excellently to point up current activities and expectations of the two Commissions.

### IRRIGATION SYSTEM DONATED

The Lawn Institute is very grateful to Toro Manufacturing, for the donation of an automatic Moist O'Matic watering system sufficient to take care of the established bentgrass plantings, and provide for some new research areas. This compact, easily-laid plastic system gives every promise of serving homeowners well. While not necessarily a "breeze" to install, neither is it too complicated for the average homeowner with a mechanical bent. If mistakes are made, these can be corrected fairly readily; splicing, connections, and similar installations are feasible with just a sharp pocket knife.

The automatic control system must have an electric connection. A single control unit is fitted to serve four release valves, each one of which is capable of activating one of the new wave sprinkler heads (which can water an area up to 50 feet square), or a series of five or more pop-up units (the exact number and placement depending upon water pressure available).

The plastic tubing can be laid underground simply by making slits in the soil with a flat spade. However, it was our experience during installation that use of one of the miniature trenching machines (which digs a trench about  $1\frac{1}{2}$  inches wide and several inches deep) permits more level and surer laying of the pipe.

We await with great interest the effect winter may have on this system. If a prefabricated kit of plastic parts such as is offered by Moist O'Matic remains durable and functional outdoors over a period of years, certainly there is added to the homeowner's repertoire of lawn equipment a convenience feature formerly the province only of the wealthy. This might particularly be a boon to the meticulously-kept turfs, such as those of Highland bentgrass. We are grateful for an especial appropriation of \$200 from the Highland Bentgrass Commission,

to cover labor and seeding costs in connection with establishing more bentgrass turf over portions of the Lawn Institute grounds where this sprinkling system operates.

#### GOLF COURSE CHECK

In a recent visit to Kansas City, Dr. Schery checked in with Bill Hart, superintendent of Swope I Golf Course inspecting the course and talking turfgrass matters most of the afternoon. Swope I is a public course fairly well maintained as public courses go. The greens are constituted of bents of various pedigree, mowed 5/16th inch in summer (shorter in spring). The fairways are basically bluegrass, but mowed as they are at about  $\frac{1}{4}$  inch, contain lots of crabgrass and various weeds. Among weeds that were numerous in the Kansas City area in July were nimblewill, buffalograss, knotweed and spurge.

#### TURF RESEARCH ANNUAL

The Eighth Annual Irrigation And Turf Research Annual, by Park Maintenance magazine, appeared as usual in the July issue. A Lawn Institute photo was cover picture.

The review of the year's research was this year under the editorship of Victor Youngner, University of California, an Institute advisor. And of course the Lawn Institute was listed among the "authorities."

As always, the coverage is too comprehensive to be thoroughly reviewed here. One of the difficulties with the turf annuals, is the tendency to try to cram too much information into too little space. And often there is insufficient technical attention to the manuscript, such that typographical errors do occur.

Discussion opens with "diseases." It is noted that granulars did not measure up to sprays, that mercury fungicides tended to be phytotoxic at high temperatures, and that though there were many good fungicides, complete disease control is still far from possible and exceedingly complex. Striped smut is becoming increasingly serious, with no control known. Hanson and Juska are reported as saying "serious consequences of leaf spot attack on common Kentucky bluegrass could be reduced by mowing it two inches or higher and by applying relatively low levels of nitrogen," something the Lawn Institute has long maintained.

Fertilization research seemed to involve increased fundamental, abstruse investigations during the year. New grasses stressed a couple of recent putting green releases, and among bluegrasses "common Kentucky bluegrass came out first in a report on the use of three Kentucky bluegrass varieties - Merion, Newport and common - -." Milorganite investigations on winterseeding are mentioned.

Under "insecticides," mites, nematodes, and sod webworms are given attention. A lengthy section is also devoted to "irrigation." "Management aids" follow, and the "weeds" section mentions some of the newer pre-emergence herbicides but nothing in the nature of a striking breakthrough.

It is obvious from this Annual, how complex and far-reaching is turfgrass interest and research these days. It becomes a full-time occupation to keep up with published information alone.

### WINTERKILL

Last winter the Institute grounds went into cold weather in an exceptionally dry state, and there was injury to turf during winter not before seen. The American Potash Institute released an interesting leaflet on winterkilling. While this refers chiefly to forage species, some of the reasoning could doubtless be extrapolated for turfgrass. Some of the factors that increase winter hardiness include healthy roots, high reserve foods, high protein content, increased hydrophilic colloids, reduced respiration, high cation content, and large vessels. It is noted that adequate (potassium) fertility increases root growth, aids photosynthesis, increases starch and proteins, reduces respiration, and reduces water loss. The implication, of course, is that well fertilized plants will better withstand winter, especially when hardened by ample cations.

### BLUE AND BENT FOR WINTER MIX

Chan Baker writes that his firm is bringing out a new formulation of Green Shade winterseeding mix, containing compost. Among the wintergrasses are bluegrass and bentgrass, with seed count sufficient to exceed the claims for 20 lbs. of ryegrass.

### DO SHADED GRASS LEAVES HELP?

A study by Burton and Jackson, reported in Crop Science, investigated whether the lower (shaded) leaves of coastal bermudagrass contributed anything to plant performance. Conclusions were that the shaded (yellow) lower grass leaves seem not only to contribute nothing to growth and yield, but actually are "parasitic" in the sense of respiring more than they are photosynthesizing.

### TUPERSAN TESTED

DuPont kindly sent a liberal test supply of the pre-emergence herbicide, Tupersan. Though not yet commercially available, it has received excellent advance discussion, especially in that it does not interfere with germination of grasses being sowed.

One is usually dubious about such claims until actually having tried the material. Tupersan was sprayed at the recommended rates over several new plantings, and across established bentgrass and bluegrass, at the Lawn Institute grounds. There was not even temporary discoloration to Penncross creeping bentgrass, Highland bentgrass, bluegrass, or newly sprigged bermudagrass. Newly seeded rows of a bluegrass blend, perennial ryegrass, and bentgrass indicated full germination of each of these. We are thus encouraged that the story is true, that Tupersan (at a 6 lb./acre rate), will not interfere with germination of seeded grass when sprayed as a surface pre-emergence immediately after seeding. Moreover, the material seems thoroughly safe on established grass.

How effective the material is as a pre-emergent weed control could not be completely tested, in that the treated area did not abound in many common weeds (including crabgrass). But it did seem that several summer weeds were checked, although not purslane. If the promise this material so far has shown is born out, it should provide a technique which might permit more effective sowing of lawns in spring and

summer. Tupersan has been further successful in the enlargement of Highland bentgrass turf plots this autumn.

#### PRE-EMERGENTS RESTRICT BLUEGRASS

A study by Gaskin, reported in the Agronomy Journal, indicates that most familiar pre-emergence crabgrass controls inhibit rhizoming and often tillering in bluegrass. The studies were chiefly on Merion. Zytron produced a darker blue color (more vigorous appearance), but repressed rhizoming and caused the rhizomes to temporarily grow downward rather than laterally. Dacthal did not alter the typical growth pattern, but was even more severe in suppressing growth. Bandane and chlordane had little effect, except also to restrict rhizoming at slightly higher than the usually recommended rates.

Thus, it can be concluded that there is some physiological disturbance to the permanent grass from pre-emergence crabgrass treatment, and that this ties in with the several reports that pre-emergence controls may induce thinning of the turf temporarily.

#### REPORT ON BLUEGRASS PERFORMANCE

On several occasions through the years Dr. Glen M. Wood, Agronomy Department, The University of Vermont, has been sent bluegrass seed from different regions (origins). Wood is still planting and observing these sods. His most recent report states: "I have been unable to observe any real differences in the bluegrasses of various origins you sent me in 1962. - - have formed good sod, but essentially alike."

Earlier Dr. Wood noted differences when comparing northern with southern bluegrass seed. He writes: "This is in contrast to the so-called northern and southern lots supplied in 1959, the southern being by far the better." Characteristics of the individual lots of seed probably made more difference than place of origin!

#### SEAL-OF-APPROVAL ADVERTISING

Following are excerpts from a letter received from Chase Cornelius, of Northrup, King, relating to the firm's experience in test advertising using one of the Institute seal mats along with NK's own brand identification. This advertising was confined to a single trade area (Minneapolis), for comparison with other trade areas where the seal was not featured.

"We do not yet have final figures for this spring's sales. However, our Golf Brand lawn seed sales in the Twin Cities market have been outstanding.

As you know, we have taken the bulk of our available Lawn Institute funds for a series of ads run in the Minneapolis Star and Tribune. We were able to get excellent placement on these ads and they formed a continuity of advertising that tied in perfectly with the Northrup, King advertising done with large ads and on the radio.

We consider the series of Lawn Institute ads quite successful."

### GOOD YEAR FOR REPRINTS

The use of Institute reprints in various consumer campaigns is mentioned from time to time in Harvests. When all totaled, the sum is quite impressive. In two instances 25M of a single reprint were ordered and distributed by a member or associate of the Lawn Institute. Several dispersals of over 1 M have occurred this quarter. George Abraham, making the offer through his syndicated column, has utilized over 3 M each of three different reprints. All told, 22 different requests have been honored, involving a second reprinting of some older reprints as well as dispersal of the newer ones just appearing. "Turf Tips," "23 Questions - -" and the lawngrass portrait series have all proved especially popular this quarter. Over 75 M reprints will have been distributed.

### ROSE ANNUAL CARRIES INSTITUTE STORY

The 1964 American Rose Annual appeared in June, the annual book of the American Rose Society. The more than 250 pages were devoted chiefly to roses, as would be expected. But "Good Lawns And Rose Splendor," the presentation by Dr. Schery given at the national convention, was included. Credit, of course, is given the Lawn Institute. The article points out the important interrelationship between lawns and attractive roses, goes on to discuss lawngrasses and their care.

### THATCH INTEREST

Appearance of "Is Thatch A Threat?" in Flower and Garden Magazine, elicited a number of letters, more than customary for a magazine story. It seems surprising that the public accepts still another chore in lawnkeeping; this augers well for how important the lawn is regarded by the homeowner. A natural concomitant to thinning or de-thatching would be bolster seeding with quality blends.

### LARGE REPRINT DISPERSAL

The Lawn Institute was pleased to have help from Parker Sweeper, in the distribution of 25 M copies of the "Is Thatch A Threat?" story from Flower and Garden Magazine. Parker Sweeper has reimbursed the Institute for the reprints, and is, of course, distributing them without charge through its normal dealer channels. We are grateful for this help in aiding the Lawn Institute.

### PRESS KIT CREATES INTEREST

The Gro-Green Spraying Company asked for further information, upon recommendation of the Garden Editor of the Cincinnati Post & Times Star, following receipt of the autumn press kit. Letters are received fairly frequently asking to be put upon the "mailing list" for press kits.

### SEED WORLD CARRIES INSTITUTE NOTE

The July 10 issue of Seed World, carried a column reviewing the Lawn Institute's annual meeting in Kansas City. We are to the magazine for helping to spread the good word.

#### ADVISOR MAILING

The Institute maintains liaison with the technical turfgrass world, in large measure through its Board of Advisors, experts at research centers across the country. A semi-annual mailing to the Board of Advisors was completed in September, bringing them to date on trends within the seed industry, and supplying them liberally with back reprints published since the last mailing. Gratifyingly, several replies have been received offering comment, and thanking the Institute for its effective program.

#### PRESS CLIPPINGS

When the Institute felt it could afford year-around press clipping service, we customarily gave quotes of Institute story pickup in Harvests. With the more recent budget stringencies, clipping service has been cut down to only three months yearly, of which one month only is scheduled for autumn (September). While a sizable supply of press clippings is on hand, many of them reflecting the Institute stories and direct mention of the Institute, sample comment from them is being reserved for the next Harvests. The quarter ending the calendar year is generally less filled with other comments, and there will be more time to accumulate the full complement of clippings, not all of which have been received and surveyed as this issue of Harvests goes to press.

#### INSTITUTE LITERATURE FOR SHORT COURSE

Noteworthy in roadside landscape work, is the annual Short Course organized by W. J. Garmhausen in Ohio. The Short Course and its tour are attended by the leading highway landscape architects from most states. It is always gratifying to have chance to participate in this program, and we are indebted to Mr. Garmhausen for supplying attendees with pertinent Institute reprints. In the "litter bags" given registrants this year are copies of "The Importance Of Quality Seed" and "Large Area Seeding."

#### ON THE LECTURE CIRCUIT

This was the full page announcement in "The Garden Center Bulletin," of the Kansas City Park Department Garden Center. The announcement carried a picture, no less.

"THE GRASS MAN IS COMING AGAIN. - Dr. Robert Schery, Director of the Lawn Institute, will present a program on lawngrasses and techniques for growing fine turf at the Garden Center, Tuesday evening, July 14th at 8:00 o'clock. Dr. Schery will use illustrations with his talk and hand out leaflets on various phases of turf growing at the conclusion of his program.

This program is open to members of the Garden Center Association only, because of the limited seating available. Persons with specific questions are asked to write in prior to July 10th so Dr. Schery will have time to incorporate the answers into his talk. Samples of grass, to be identified, or for disease analysis, ought to be freshly dug, the roots carefully washed, the entire plant wrapped in waxed paper, and brought to the Center through the day Monday, July 13th.

Dr. Schery will address the members of the Men's Garden Club of Kansas City, Monday evening, July 13th, at which time members of the club will have an opportunity to discuss their lawn problems with Dr. Schery."

#### VELSICOL ORDERS INSTITUTE LITERATURE

Letter from G. Newel, Librarian, of Velsicol Chemical Company, brought an order for copies of "The Householder's Guide - -," and a request for any other publications the Lawn Institute might have suitable for the research and development library. A complete assortment of reprints was sent.

#### FERTILIZER INTEREST

The Smith-Douglass Company, makers of Nutro products, have developed an interesting 35% nitrogen fertilizer, produced by an exclusive extrusion process. Samples were sent the Lawn Institute earlier in the year.

Recently Dr. Schery visited Mr. Hartl Lucks at the Smith-Douglass Columbus plant, discussing this product and its acceptance. An outgrowth of the meeting was that Smith-Douglass agreed to furnish materials to try out this intriguing fertilizer on several grass types, and under different methods of application.

This project ties in very nicely with Institute efforts in behalf of Highland bentgrass. S-D is particularly interested in the effects of the fertilizer on bentgrass, and it well may be that valuable publicity will accrue to Highland bent through Smith-Douglass cooperation.

#### PICTURE BOOK ON LAWN TROUBLES

The Extension Service of Cornell University, Ithaca, has recently issued a small booklet entitled "Picture Clues To Lawn Troubles," authored by Smith and Cornman. Price 75¢.

Main cost is in color reproduction of 22 photos defining lawn problems. Text is actually rather incidental to the photos.

The first illustration pictures individual plants of fine fescue, Kentucky bluegrass and bentgrass, while the text explains that these are the major turfgrasses for New York. The following photos almost all illustrate troubles that can beset these grasses, including diseases, careless fertilizer application, mowing injury, insect damage, drought, and so on.

It is especially interesting to note the attention given annual bluegrass, defining it as one of the major troubles of lawns. This ties in with the recent New York action declaring *Poa annua* noxious. A close-up color photo of *Poa annua* should aid in its identification, while a dramatic view of brown turf laid back emphasizes "Dead annual bluegrass. A frequent mid-summer disaster, and the most difficult common turfgrass problem, - -."

As indicated, the booklet is brief, and makes no attempt to name specific products or cures for the troubles outlined. It is probably too "negative" for a sales aid,



emphasizing all the disasters that might strike without noting how relatively infrequent these are and how trouble-free most lawns can be. But on a more technical level, for showing in the way that words cannot the appearance of the different diseases, lawn insects, and so on, the booklet can be an invaluable aid. It will also prove a useful item for purveyors of seed free from *Poa annua*, who are stressing this point.

#### FINE FESCUES IN COLORADO

Bluegrasses do so very well in the Denver area, that the usefulness of fine fescues is sometimes overlooked. It was observed, however, when Dr. Schery was making calls with the county agent there, that frequently fine fescue proved notably successful in shaded locations. The county agent was suggesting to homeowners, particularly for spots where *Poa annua* had passed out, a seeding mixture consisting of 85% bluegrass and 15% fine fescue.

#### MAGAZINE STORIES PLANNED

In early September it was possible for Dr. Schery to visit with several editors in New York City. Talking with Harry Atkins and others in charge of Natural History Magazine, a bluegrass story was planned. A visit with Mary O'Brien, Editor of Popular Gardening, resulted in a lawn story with a landscaping slant. Both items are for spring 1965 issuance.

#### USED BY GARDEN SUPPLY MERCHANTISER

The June issue of Garden Supply Merchandiser included the item "Interest Grows In Lawn Thatch," crediting Dr. Schery and the Lawn Institute. Also in the same issue was "Highland Bent Advised For Close-Clipped Turf," again with Lawn Institute credit.

#### TEWELES DROP LAWN BUSINESS

We regret to have had word that an Institute member has now dropped out of the lawn seed business. In making this known to the Institute, L. William Teweles, President, writes: "I will always remember our association with a great deal of pleasure and we are sure that our paths will cross in the future."

#### MORE REPRINTS DISTRIBUTED THROUGH "GREEN THUMB"

George Abraham, syndicated columnist and WHAM (Rochester, New York) radio commentator, requested additional Lawn Institute reprints to offer his readers. This follows a successful initial offering in June.

#### KINGWOOD CENTER EMPHASIZES LAWNS

The August Bulletin of Kingwood Center, Mansfield, Ohio, featured "To Build A Lawn." Kingwood is a regular recipient of Lawn Institute materials, and on several occasions Dr. Schery has spoken to gardening groups there.

#### MAGAZINE COPIES WITH INSTITUTE STORY

The complete issue of Flower and Garden Magazine containing the Institute story "Is Thatch A Threat?", was utilized in a special mailing by Parker Sweeper to a selected list of distributors. A yellow insert marked the page upon which the article began, and also included a flyer offering other Institute-originated stories done in the past (as well as opportunity to order reprints of "Is Thatch A Threat?").

#### BLUEGRASS RUNS OUT TALL FESCUE

On the Lawn Institute grounds, it has never seemed possible to get rid of tall fescue, by "outgrowing" it with Kentucky bluegrass. Yet, during a panel discussion at the Missouri Turfgrass Conference, such a claim was made for a mixed Kentucky bluegrass-tall fescue sod. It was said that liberal use of fertilizer caused the Kentucky bluegrass to displace the tall fescue eventually, without any resort to herbicides or hand digging!

#### DE-THATCHING

The Jenkins Equipment Company of Dexter, Michigan sent Mr. M. M. Hinckley to the Lawn Institute grounds, to demonstrate a new plastic broom as a possible mechanism for de-thatching turf. The rotary brooms, on hydraulic lift, are attachable to tractors, garden tractors, and Jeep-type vehicles. In general appearance and performance they resemble the street-sweeping brooms long used in the natural Kentucky bluegrass curing yards. The demonstration on the Institute grounds indicated that the broom attachments have not yet been sufficiently simplified for facility in use by the average homeowner, but might well prove good for institutional grounds. The plastic bristles of the broom did a surprisingly thorough job of lifting out thatch (duff) with open (bluegrass-type) turf, with little injury to the green leaves. No test was possible on bentgrasses, because the demonstration equipment was on a Scout, too heavy to run onto the moist bentgrass areas.

#### TRIAL PLANTINGS IN ST. LOUIS

Link's Nursery field day compared plantings of a number of turfgrasses, and explained various management practices for the area. A great many code selections of bermudagrass are under test. Also many bluegrasses, fine fescues and bentgrasses. When examined September 22, most bluegrasses looked very good at this favorable growing season. Penn State K-5-47 was among the better appearing selections, but all tests are only a year old (with tribulations still to come). Pennlawn seemed slightly better than most of the other fine fescues (all of them planted in full sun, not desirable in the Missouri climate). Highland bentgrass showed none of the aggressiveness claimed for volunteer bentgrass as an invader of lawns in the Great Lakes area. Ryegrasses were doing poorly, being invaded by volunteer bluegrass. The new Evansville strain of putting green bentgrass seemed to be turning "puffy," not as good as the familiar mixture of Arlington-Congressional.

Tupersan, used as a pre-emergent, seemed to have inhibited sprouting of planted grasses, but there is some uncertainty about rates and the particular reason for

this happening here but not elsewhere where tested. Ray Freeborg indicated that liquid Zytron rates sufficiently strong to kill nimblewill, also damaged bluegrass in the St. Louis area, so that there is still no really satisfactory answer to this increasingly important pest.

Link's Nursery is currently counseling vegetative planting of zoysia for St. Louis, or where a cool-season grass is wanted, a combination of bluegrasses including 50% natural Kentucky bluegrass, 20% Newport, 10% Arboretum, 15% Delta and 15% Merion.

#### FOREIGN TURF

Dr. William Daniel, Institute advisor at Purdue University, recently dropped by the Marysville office and commented upon his experiences when touring turfgrass research facilities in Europe. He was well impressed with many of the activities, especially in Holland, Denmark and Sweden. Of course a quick glance does not suffice to indicate permanent value in turf plantings, but Dr. Daniel is impressed with the high level of interest and the qualifications of most personnel.

However, Daniel's impression of the lawns and turf in England, so often extolled in gardening publications, was not flattering. He indicated that what is accepted as a fine lawn or turf in England would be equivalent to one of our more poorly kept golf courses in this country. Most turfs seem under-fertilized, thin, and not meticulously weed-free. It is interesting to have these comments, since so many of the English practices (such as close clipping, and "rolling the lawn for 50 years) would seem quite questionable according to United States' recommendations.

#### EUROPEAN TURFGRASSES

The June issue of Parks and Sports Grounds (English), points up quite clearly some of the progress in North European production of selected turfgrass varieties. In an article "Sports Turfgrasses From Holland," by E. Hart, there are mentioned several selections now being imported into this country, as well as striving for a greater share of the English and European market. In most cases the selection is of Dutch origin, and the seed imported from Holland.

The Hart article mentions: " - - almost everyone - - will have read - - about new grass varieties which are now being imported from Holland. Such names as 'Highlight' Chewings fescue, 'Oasis' Creeping red fescue, 'King' timothy, 'Charming' sheep's fescue, and 'Prato' (bluegrass) to mention but a few, will no doubt be added to the vocabulary of those engaged in turf culture."

Hart had visited several Dutch seed firms, and was quite well impressed with the quality discovered. Upon return to England, he established test plots with a number of individual selections and mixtures. A typical "all Dutch" planting consisted of 40% "Pelo" perennial ryegrass, 20% "Prato" bluegrass, 20% "Highlight" Chewings fescue, and 20% "Golfrood" Creeping red fescue. This was said to form a dense, compact turf, of good color, and little weed invasion.

In some mixtures United States seeds were tried, including Chewings fescue, and "Browntop" (Highland bent?). In one combination there was certified S.23 perennial ryegrass, of British origin.

Although the plots under observation were not very old, the one spoken most highly of in the article was planted to 40% British perennial ryegrass, 20% Prato bluegrass, 20% Chewings fescue (USA) and 20% Creeping red fescue (Canadian).

If nothing else, this article is indicative of the increasing interest in turfgrass, and the development of specialized varieties in other parts of the world. Hart concludes: " - - could experiment more with grass seed mixtures, using the various grass species, varieties and strains coming into Britain from all parts of the world. It has been suggested that in this country we are not generally prepared to spend enough money on grass seed mixtures and when one considers the vast amount of money which is spent on the acquisition, levelling, draining and fencing of new playing fields and parks there must be every justification for ensuring that the playing field is not spoiled - -."

#### LILY HANDBOOK

The North America Lily Society recently issued an attractive, illustrated handbook "Let's Grow Lilies." Not that Institute members are particularly interested in lilies, but this type of source book very well might be an example of what could be done to provide authoritative data on quality turfgrasses.

It might be noted, too, that this handbook speaks out bluntly for American growers - " - - from a reliable American dealer will arrive as fresh and crisp - -," while "foreign bulbs, on the other hand, are usually lifted too early, carelessly mistreated or neglected, roots are chopped off - - even encased in a suffocating coat of wax - -."

#### H. J. HUDSON LAWN SEED

The H. J. Hudson store, well-known Detroit outlet with an outstanding gardening department, has been in touch with the Lawn Institute concerning its lawn seed formulations and quality. This contact was initiated through the good offices of Mr. Hartl Lucks, Smith-Douglass Co. It is gratifying to be of assistance to Hudson, in suggesting seed blends and means for maintaining a quality line of seed goods.

#### NOT SO MUCH NITROGEN LOST AS THOUGHT

In an article "Nitrogen Movement In Undisturbed Profiles Of Fallowed Soils," Boswell and Anderson, reporting in the Agronomy Journal, indicate that soluble nitrogen remained pretty well in the topsoil over prolonged periods and in spite of abundant rainfall. Nitrogen studied as soluble nitrate, was applied as a potassium salt. After five weeks, and two inches of rainfall, on a reasonably sandy soil, almost all of the nitrogen remained in the top six inches of soil. After many months and inches of rainfall, it was still within the top two or three feet. In seasons of soil saturation (winter), soluble nitrate seeping lower may be brought back up subsequently by capillary action.

#### RESEARCH ON BLUEGRASS SEED-SOD

Lage and Roberts (Institute advisor), of Iowa State University, published a discussion in Volume 84 of the Proceedings of the American Society for Horticultural Science, on "The Influence Of Nitrogen And - - Soil Conditioner On Development Of Kentucky Bluegrass - - From Seed And Sod." Seeded turf consistently out-produced sodded turf in foliage yield. Conditioning the soil did not improve yields, in fact depressed them under high nitrogen levels. High nitrogen fertility reduced root growth (this was not typical nitrogen fertilization, consisting as it did of 20 lbs. of ureaform, - some 7 lbs. of actual nitrogen, - mixed in the root zone per thousand square feet). It has been known for years that heavy nitrogen fertility often lowers growth of underground parts, while generally increasing foliage markedly.

#### LEACHING FROM PLANT LEAVES

A study by Tukey and Mecklenburg, in the American Journal of Botany, deals with a wide assortment of plant products leached from the foliage, much of it re-absorbed through the roots. Apparently it is widespread in nature that metabolic products formed in the leaves are picked up by rain, dew and mist, and are recycled through the same or other plants. Such products were followed by introducing radioactive atoms of calcium, phosphorus, strontium and carbon. The implication is that plants are always helping create their immediate environment, that the leachers may help or hinder other vegetation depending upon conditions and types. Compatibility of turfgrasses may at least in part depend upon such natural cycling.

#### BLUEGRASS AND FINE FESCUE ADAPTATION IN ALASKA

The May-June issue of Crop Science carried an article on "Fall Growth Behavior and Winter Survival Of Festuca rubra and Poa pratensis in Alaska as Influenced by Latitude-of-Adaptation." In a study some years ago, the Lawn Institute determined (by sending several sources of natural Kentucky bluegrass to all sections of the United States), that there was relatively little special climatic adaptation in the natural grass. The Alaska study suggests that this might not always be true, for climates so different as Alaska and the older 48 states.

The difference was particularly pronounced with fine fescues. Alaskan sources turned brown in autumn while southern sources remained green; and in severe winters they were not nearly so severely winterkilled. With bluegrass there was no difference in autumn appearance, but the two selections picked up in Alaska survived notably better than conventional varieties or commercial sources obtained from more southerly sources.

#### GROWTH RETARDANTS ON BLUEGRASS

Juska and Hanson, USDA report in the June Golf Course Reporter on research in which three growth retardants (maleic hydrazide, CCC, and Phosphon) were used on Kentucky bluegrass. Both Merion and natural bluegrass were test species.

Maleic hydrazide seemed somewhat more effective than the other two chemicals, and all treatments seemed to involve some risk of discoloration. Maleic hydrazide

was good in repressing seedhead formation. The majority of the treatments seemed to thin the grass somewhat, conspicuously more than with regularly mowed turf, a little bit more than unmowed turf (which normally produces fewer plants than comparable turf mowed).

The overall conclusion would be that growth retardant treatment offers little in the way of practical possibilities for maintaining turf. Biggest sales point with maleic hydrazide might be in the repression of seedheads, on varieties of grass where this is a seasonal problem.

#### ROADSIDE PLANTING

Should any member like to have a copy, a few extra publications of the 22nd Short Course on Roadside Development, Ohio Department of Highways, are on hand at the Marysville office. The Institute has cooperated through the years with this Short Course, national meeting ground for highway landscapers. In the publication, a number of states report on their roadside planting progress. Two special reports may be of particular interest to Institute members.

The first of these involves an evaluation by Coffman and Edwards, Ohio State University, on the extensive experimental work along Interstate 71 north of Columbus. Tests were on what is now the prescribed seeding for Ohio roadsides, - 65% tall fescue, 25% Kentucky bluegrass, 5% redbud, and 5% Alsike clover. Observations indicate that only the Kentucky bluegrass and Kentucky-31 tall fescue survive. Fifty pounds of nitrogen per acre was found sufficient to increase the quantity of bluegrass in the stand. Mowing scheduling, shrub planting tests, and chemical growth control (found doubtfully useful) are also discussed.

Anderson, of Maryland, report on "Inhibitors for Economic Maintenance," dealing extensively with maleic hydrazide for control of vegetative growth and (presumably) reduced mowing. This, and other references in the volume, indicate that maleic hydrazide is rather rough on fine fescues. Spring applications are not only useful for inhibiting growth, but prevent seedhead formation on Kentucky bluegrass and tall fescue.

It was pleasing to note in the publication repeated reference to both Kentucky bluegrass and fine fescues on the roadsides in the eastern states. Perhaps some progress is being made in regaining these markets from tall fescue? It is especially encouraging to see reference so frequently to the fine fescues.

#### DENVER BOTANIC GARDEN EXPANDS

The Lawn Institute has previously sent seed to the Denver Botanic Garden, for exhibit plantings on the grounds outdoors. Now nearing completion is a magnificent new conservatory, which will house plantings exotic to Colorado. Progress at the Denver Botanic Garden seems picking up.

#### APPRECIATES SEED

"We received the seed in very good shape and now have it in storage. As in the past, we appreciate the fine cooperation of you and your organization." - Dr. Evert O. Burt, Assistant Turf Technologist, Fort Lauderdale, Florida

### POA ANNUA IN POA TRIVIALIS

The weedy nature of imported seed can be of concern. Chan Baker writes from Florida: "Harrell is, of course, already selling a winterseeding mixture that closely resembles (the Lawn Institute mix); and (Milorganite's) *Poa trivialis* mixture not withstanding - - 200 bags of *Poa trivialis* (being sold) contain 360 *Poa annua* per ounce - yet, it's the best in this country."

### EUROPEAN LAWN RESEARCH

Word has come through Mr. E. H. Gattiker, Samen-Mauser, Zurich, indicating that European firms have banded together as an association, sponsoring lawn research in Germany at the University of Giessen. There is no indication just what this association's objectives are, or whether Lawn Institute literature forwarded to Europe in any way prompted the program.

### DENVER LAWNS INSPECTED

Herb Gundell, county agent for Denver, invited Dr. Schery to participate in the judging of the "Best Lawn in Denver" annual Denver Post contest. This is the project so enthusiastically editorialized upon by Garden Supply Merchandiser Magazine. When Dr. Schery was in Denver, he visited a number of lawns in the city in the company of Gundell, as well as routine agent calls. One continues to be impressed that Denver is an outstanding lawn city, an environment in which bluegrass and fescues do exceptionally well (with fewer afflictions than in the humid East). Main complaint at time of visit was bare spots due to dying-out of *Poa annua*, which sometimes gets a pretty good start in Denver under the constant irrigation that must be practiced. Recent hot weather was causing considerable decimation. *Poa annua* seemed fairly prevalent in bentgrass golf greens, too.

### AN ARGUMENT FOR SEEDING

Institute advisor Eliot Roberts of Iowa and David Lage published in the June Park Maintenance an item of interest to seedsmen, "For Better Turf, Should You Seed Or Sod?" The research was conducted on natural Kentucky bluegrass. Several arguments are given favoring seeding.

Turf from seed develops more roots and foliage than turf established from sod.

Turf from seed has an adequately balanced root system, which supports foliage production well after clipping.

Root development is better when nitrogen fertility is low (compared to phosphorus); conversely, high nitrogen causes comparatively poor root development (and should be avoided especially with newly moved sod).

#### LAWN SEED PACKAGING INTEREST

A call from the New York office of Continental Can recently indicated that firm's interest in lawn seed packaging. In an attempt to survey the market, Canco was particularly interested in the proportion of different size containers in which lawn seed is sold.

#### PINEHURST HILLS COUNTRY CLUB

When in Denver, Dr. Schery inspected the Pinehurst Hills Country Club with Mr. Gundell. This relatively new and very attractive golf course must, of course, be totally irrigated. At the time of visit in mid-July, most fairways and greens were sparkling, in contrast to the surrounding semi-desert vegetation. The fairways have been planted to Merion Kentucky bluegrass, and the greens to Penncross bentgrass. In both instances *Poa annua* and a few other weeds were making some inroads.

#### ARMY ENGINEERS HEARD FROM

Burton Kiltz, Chief of the Land Management Section, Department of Army, recently volunteered useful comments on the lawngrass zones of the United States. This, after seeing the Institute article in Weeds and Turf, April issue. Mr. Kiltz has apparently been assigned the establishment of military grounds in all sections of the nation, and his comments on the dry western plains are especially helpful. He has to say of the irrigated high plains: "For lawns, this is bluegrass country and there's little advantage of using other species under irrigation." Mr. Kiltz invites further consultation: "Your comments on the above notes would be appreciated."

#### MORE HORTICULTURAL INTERNATIONALISM

With continually more rapid communication, the horticultural world is shrinking. Latest is an International Society for Horticultural Science, with its publication "Chronica Horticulturae." While the council is world-wide, editorial offices are in the Netherlands, with the editor H. F. Waterschoot. Hollanders seem to be very much in the forefront of horticultural activities these days.

#### NEWSPAPERS REQUEST PHOTOS

Mention of photo availability in the autumn press kit brought numerous requests from important newspaper outlets across the country. Eighteen photos were sent out in early August. Among the important locations to which photos were sent were Cleveland, Atlanta, and Levittown, Pennsylvania.



### SUPPORT IN FLORIDA

For the past year the provost at the University of Florida has had a series of symposia (the D.A.R.E program), seeking from industries in the agricultural field suggestions as to how the University might be most useful. Dr. Schery was invited to one such, on ornamental horticulture.

Chan Baker had been disturbed that much attention was being given vegetative grasses, little to seed. After exchanges of correspondence with the Lawn Institute, he framed a rebuttal in behalf of lawn seed for the provost. We were pleased to note that northern grasses for winterseeding were not neglected, "The demand for better lawngresses involves the increased use of cool-season grasses for winter overseeding, which is no longer limited to golf courses. Further work in this direction is very important."

Several prominent seedsmen in Florida, and a number of garden supply stores, have joined in the movement for more stress on lawn seed.

### UNUSUAL TURF INTEREST?

It is sometimes surprising from where inquiry comes. The Plant Engineer for Pratt & Whitney Aircraft (United Aircraft Corporation) wants from the Lawn Institute a "standardization program"; and a Chief Warrant Officer of the United States Army wants "any printed material" about seed and new strains, especially of bermudagrass!

### THANKS FROM GERMANY

Dr. H. Scholz, of the Berlin-Dahlem Botanical Garden and Museum, had asked for information on Highland bentgrass and a seed sample. In appreciation for the materials sent this note came: "Für die freundliche Überreichung Ihrer Veröffentlichungen - - - dankt verbindlichst. H. Scholz."

### MT. SAN ANTONIO COLLEGE REQUESTS LITERATURE

A complete assortment of Lawn Institute literature was sent to Mt. San Antonio College in Walnut, California, upon the request of Agricultural Instructor, D. R. Webster. We are pleased to see Institute materials useful in educational programs.

### ABOUT QUALITY SEALS

The following item was carried in the July 6 Horticultural Newsletter, and may be worth thinking about as the same sort of thing might apply to lawngresses.

THE NATIONAL MAIL ORDER NURSERYMEN'S ASSOCIATION HAS ADOPTED A "SHIELD OF QUALITY". It is supposed to mean that the members of the Association have agreed to certain ethical standards in business. The "shield of quality" is to appear in their catalogs and in ads. According to Roger Krider,

secretary of the Association it is the "unanimous pledge to use truthful advertising and to sell only quality trees, shrubs and seeds". This is a major step forward and the Association is to be congratulated. It may encourage many home owners who have had unfortunate experiences with mail order nurseries to try them again. If they live up to the "shield of quality", fine. If they don't the results will be disastrous for them. Now if all members will indicate in their catalogs the size of the woody plants offered for the price quoted, the NMONA will get and deserve the confidence of the public.

#### ON MOVIES

"Modern Memos" indicates that the average audience for films it distributes is 101. The \$3 cost for the distribution thus comes to approximately 3¢ per viewer. So once you have a film, an audience watching it presumably with more attention than they would accord a mailing, is reached at less than the cost of a first-class letter. This may prove instructive concerning future decisions on the showing of "Bluegrass Beauty," if support enough from the West eventuates to merit increased emphasis of this Institute film.

#### THE INCREASING FLORIDA MARKET

The Florida Turfgrass Association reveals these figures, as indicative of the coming market potential in Florida, which should spill over into turf seed and winterseeding. Population to double, reach 8 million, within a decade. Personal income to rise smartly, exceed national average. Turf sales to double, with 622,000 acres kept in fine turf by 1975. 16,000 acres increase annually, half in home lawns, well over ½ billion dollars spent on lawn making. Annual maintenance costs over \$100,000,000.

#### DEALERS RECEIVE REPRINTS

Through the good offices of the Lloyd Mansfield Company, large quantities of Institute reprints are being employed in the "Seeds for Thought" campaign, in behalf of Whitney Seed. 6 M copies of "Autumn Lawn Seed Sales," "Good Lawn Seed Goes With Autumn," and "Mr. Dealer - -" were utilized this September.

#### "GREEN CARPET" IN CALIFORNIA

Dr. Williams, of the Los Angeles State and County Arboretum, sent information about the annual "Operation Green Carpet." Representatives of several Lawn Institute member firms are on the organizational committee. The "operation" seems to be a very practical attempt to acquaint homeowners with equipment and products available to them, for modern lawnkeeping. Booths are available to interested exhibitors without charge, and demonstrations given in the use of equipment, procedures, and inspection of plant materials. All in all, it seems an excellent way to convey information to the general public, not often achieved in the field days at state experiment stations (attended mostly by professionals).

#### SOD INDUSTRY EXPANDING IN DENVER

It was noted when visiting Denver, that sod growing and sales is becoming quite a factor in the area. Local sod production of many bluegrasses (including Park, Merion, and others) is said to encompass a cycle of 14 months from seed to lifted sod. Sod is reported to sell for 6¢ per square foot delivered.

#### FLORIDA RESEARCH HELP ACKNOWLEDGED

The Florida Turfgrass Association newsletter for July-August carried acknowledgements for materials and grants given in support of research. The Highland Bentgrass Commission received double listing, - for furnishing financial support as well as seed. More recently the Highland Bentgrass Commission has joined with other Lawn Institute interests in supplying seed in mixture, the receipt of which is acknowledged in the newsletter in the name of the Lawn Institute. A recent communication from the University of Florida marked the "Lawn Institute mix" (a winterseeding mixture containing two fine fescues, two bluegrasses, and Highland bentgrass) as being the best or near the best in the 1963-64 testing. It was the preferred winterseeding mixture of the research co-ordinator, and as such might be viewed as the "recommendation" of the Experiment Station.

#### MORE WINTERSEEDING PUBLICITY

An article entitled "Winter Green Preparation," authored by O. J. Noer, appeared in the August issue of Golfdom. Noer finds serious fault with ryegrass as a winter species, but plugs unreservedly for *Poa trivialis* as the mainstay of substitutes mixtures. He dislikes redtop. He calls for Kentucky bluegrass free from *Poa annua*.

#### OUTSIDE SUPPORT

As a result of some cooperative activity with Smith-Douglass fertilizer, the Lawn Institute was fortunate to have an article by-lined by Dr. Schery ("Easy Does It") widely distributed to newspapers through Smith-Douglass channels. Although the story is much concerned with fertilization, good grass is of course brought into focus. The opening sentence reads: "Rich green bluegrass, bentgrass thick and weedless, even fine fescues (whose demands are parsimonious) conquering those where-nothing-will-grow spots under the trees! It's easy. Fertilize."

#### INTEREST CONTINUES HIGH IN MARKETING

Mr. Vincent Brennan, of Allen, Hartman and Schreiber, Cleveland, telephoned for an appointment to discuss the marketing of turfgrass and gardening products. The firm's client was particularly interested in a tool line, but was anxious to have general background for the whole gardening field. In his visit to Marysville, Mr. Brennan received an earful on quality grass seed mixtures, and was provided ample printed information to take back to the home office.

TRADE PRESS INTEREST

The American Trade Press Clipping Bureau has requested copies of Harvests. The idea apparently is to pass along mention of interest to clients. It has been suggested that the press releases are more suitable for quotations than Harvests.

FROM GERMANY

Dr. Claus Fengler writes from Hamburg, Germany of a pending visit to the United States, and the hope to have an appointment to discuss lawngrass research. We look forward to hearing from Dr. Fengler in early October, the status of this industry in the Old World. Dr. Fengler is associated with the Max Fengler Gartengestaltung.

FOR WINTERSEEDING

B. A. Gardner, in the Mobile Press Register, has broadened his outlook on wintergrass, mentioning fescues and bluegrass in addition to the conventional ryegrass, viz.: "These are Italian ryegrass (the most universally available), Creeping red fescue, redbow, Chewings fescue and Kentucky bluegrass."

WHAT THEY ARE SAYING ABOUT THE INSTITUTE AND ITS RELEASES

"I wish to thank you for your prompt and most generous response to my letter of 22 April 1964. The additional material you sent me, over and above my original request, has materially added to the technical reference file in this office. If I may ever be of assistance to you, please do not hesitate to call on me." - Roderick M. Coan, M. S., Entomologist, U. S. Naval Station, Washington, D. C.

"Enclosed is our check - - to cover dues - - the extra is a 'THANK YOU' for your splendid cooperation and for supplying photos." - Paul Speicher, The Cyclone Seeder Co.

"I thank you very much for your - - information on better lawns - - this is very much appreciated." - Rene Paquet, Landscape Architect

"I have seen a copy of your latest publication on Lawn Maintenance. Is it possible to receive a copy of the same?" - Dan Steibler, Joda Lawn Service

"- - The press material you send us is most helpful in promoting - - lawn seed. We would appreciate your sending us any home lawn photographs, which we could use - - in the newspapers." - Kirkland, White & Schell, Inc., Atlanta, Georgia

"I appreciated receiving your latest packet of lawn information - - In a recent issue of a gardening magazine your article on thatch was of interest. I am vitally interested in learning more about the nature of thatch build-up." - Henry Indyk, Rutgers University

"I would appreciate continuing to receive your lawn information kits. I find them useful in keeping up with current thinking." - Glen M. Wood, University of Vermont

"We have read with a great deal of interest your article 'Good Lawns And Rose Splendor' appearing in American Rose Annual 1964. It is an outstanding presentation and of great personal interest - - We are now sending out our invitations for articles to appear in our 1965 Annual and would be greatly honored if you could do an article for us on the same subject." - Orville E. Bowles, Vice President, The Canadian Rose Society

"Your recent article in August issue of Flower & Garden - - caught my attention - - I also have read and re-read your latest book. Please help me clear up a few questions - -." - James Patterson, LaGrange, Georgia

"If it would not be too much of an imposition, I would appreciate it very much if you could send me eight of the packets of 'Latest Public Information on Better Lawns' - - I would like to supply each of our county agents that work with turf with one of these packets. - - our agents would make very good use of the information - - and help further the work of your Institute." - Rudy Favretti, University of Connecticut

"Thank you for your interesting letter of August 12, 1964 in regard to overseeding grasses. - - We received a bushel of Lawn Institute overseeding mixture and we thank you very much for sending this to us for trial. We will let you know as to the results." - T. M. Baumgardner, Sea Island, Georgia

"As garden editor of The Kansan I have found the (press kit) material included in the folio of stories and pamphlets excellent. - - If you would mail that material, and any other you can provide for the homeowner and gardener, directly to me, I would appreciate that very much." - Peggy McNarrey Lee, Garden Editor, The Kansas City Kansan

"Thank you very much for seeds of some of the bluegrasses, fescues and bentgrasses. Also your being on the program at the recent Louisiana Turfgrass Conference. I am having your articles placed with our Ornamental Horticulture Library. Please send copies of any future articles." - J. M. Peek, University of Southwestern Louisiana

"Thanks for your wonderful letters. Yes, we sent out the Lawn Bulletins. We had a good response. If you have 1000 more I'd be happy to get them." - George Abraham, The Green Thumb

"I find your kits of great value, and certainly would like you to continue to send them to me. - - Looking forward to your future material." - Margaret C. Crooks, Garden Editor, Asbury Park Press

"Thanks for your letter of the 25th and for the copies of your dissertation on Roses and Lawns. They will be used to maximum advantage." - Chan Baker, Baker Grass Industries

"We would like 300 copies of the Modern Garden Center article, '23 Questions - - This is very good material and we appreciate it." - N. M. Rothwell, Hogg & Lytle Seeds

"I am always happy to have your lawn kit and am passing on much of the information in my column of August 2; will use more later in the season. Thanks very much for all your information both for my own lawn and for my readers." - Mrs. Marshall Ford, Maryville, Missouri

"Thank you very much for sending me the press kits which I immediately distributed to our county agents. - - Thank you for your many favors." - Rudy J. Favretti, University of Connecticut

"Thank you also for your fine offer of reprints. May I consider this a standing offer and try to work out something for our coming Spring Exposition? Good luck in your every effort." - Dr. H. Hamilton Williams, Los Angeles State and County Arboretum

"Wonder if you could give me a helping hand because the new lawn really looks like hell - -. That's the cause of concern for our farm agent who - - has enough degree credits to be a doctor. Will appreciate whatever help you can dig up for me." - John Whoric, News Editor, The Daily Courier, Connellsville, Pa.

"First I'd like to tell you that we have had many good comments concerning your talk at our recent Turf Conference. We sincerely appreciate your being with us and will look forward to seeing you again in the future. We are in the throes of building a turf program in Louisiana and your appearance on our program in Baton Rouge was of much assistance in this respect." - Warren A. Meadows, Louisiana State University

#####  
#####