

B E T T E R L A W N - - H A R V E S T S

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NEW OFFICERS ELECTED

The annual meeting of the Better Lawn and Turf Institute, deferred from June, was held December 10 at Salem, Oregon, in conjunction with the Oregon Seed Growers League annual meetings. Highlights of both meetings are given under other headings. Of especial importance to the Institute is the election of the new trustees and officers. The new officers and staff alike express deep appreciation to the retiring officers and the previous Board of Trustees, for carrying on so enthusiastically through their regular term and the added several months presented by deferral of the annual meeting from June to December. A hearty congratulations to all for a job well done.

The new officers elected December 10 are:

President - Gordon Newton, Northrup King & Co., Minneapolis, Minnesota
Vice President - George Osburn, Hercules, Inc., Wilmington, Delaware
Sec.-Treas. - Robert A. Russell, J & L Adikes, Inc., Jamaica, New York

Trustees elected and re-elected are:

A. E. Bonnicksen, Western Farmers Association, Pasco, Washington
J. L. Carnes, Rudy-Patrick Company, Kansas City, Missouri
Ted Freeman, Pacific Supply Cooperative, Madras, Oregon
S. A. Funrue, Past Pres. Fescue Commission, Silverton, Oregon
Robert Humphrey, Past Pres. Oregon Seed League, Sublimity, Oregon
Arden Jacklin, Merion Bluegrass Association, Dishman, Washington
Peter Loft, Lofts Pedigreed Seed Co., Bound Brook, New Jersey
Howard Mader, Past Chairman Highland Bentgrass Comm., Salem, Oregon
Edw. F. Mangelsdorf, Ed F. Mangelsdorf & Bro., St. Louis, Missouri
William L. Rose, Pennncross Bentgrass Association, Woodburn, Oregon
Colonel Edward Spears, Woodford Spears & Sons, Paris, Kentucky
E. R. Townsend, Rudy-Patrick Co., Buffalo, New York
Gordon White, Pacific Northwest Bluegrass Assn., Salem, Oregon
Two seats for the Oregon Fine Fescue Commission, by appointment
One seat for Highland Bentgrass Commission, by appointment.

HIGHLIGHTS OF THE ANNUAL MEETING, DECEMBER 10, 1970

President Carnes called the meeting to order at 9:00 a.m. at the Marion Motor Lodge in Salem, Oregon. Introduction of members and guests was followed by brief reports from Scott Lamb (who ably handled business affairs for the Institute in Oregon), and Secretary-Treasurer Howard Mader. The Treasurer reported solvency, with all obligations honored as of meeting time, but with a continuing "tightness" of income anticipated in the months immediately ahead.

The Director, Dr. Robert W. Schery, referred members to his written summary at the end of the fiscal year which appeared in Volume 17, No. 2 of Harvests. He emphasized activities by means of slides. Miss Doris Watson, Hercules, Wilmington, Delaware, graciously agreed to a few remarks about the way a major eastern firm views cooperative public relations efforts. Miss Watson praised the Institute for its program, and the foresight of its founders and supporters in building the fine, honest image that it has attained. Hercules has been pleased to have been associated during most of the last year.

A proposed budget for the year was discussed, Secretary Mader feeling that the goal set was insufficient to really carry on the most effective program possible. Since sources of income are not entirely certain, and because past budgets have only infrequently been met, the itemizations reviewed by Dr. Schery can serve as targets only for fund-raising efforts by the incoming Board.

President Carnes, in his report to the membership, spoke enthusiastically of the Institute and its program, in spite of his having had personal complications (including change of place of employment) during his term, which made it impossible to give as full attention to the Institute as he would have liked. He thanked all concerned for fine cooperation in carrying on during his absences. Plaques of appreciation were presented to past president Edward Mangelsdorf, and to Colonel Edward Spears (Colonel Spears is the only charter member of the Institute still on the Board, a member of the Executive Committee since 1957).

Doyle Jacklin, chairman for the nominating committee, offered the slate of candidates and officers reported as elected elsewhere. Comments were elicited from representatives of the various supporting organizations, and incoming President Newton offered a brief but generous "acceptance speech".

A fine address was given by newly elected vice president, George Osburn. Following luncheon the group undertook a tour of turf-related operations in the central Willamette valley. First stop was the athletic field at Oregon State University, Corvallis, where the pros and cons of AstroTurf were discussed. It is conceded that artificial playing surfaces have many disadvantages as well as advantages, and in the opinion of most people are not so attractive as is a well-maintained natural turf. However, there is no question but that living grass could not withstand the constant use this field is subject to, including use by classes throughout the day as well as football practice and games.

Next visited was a high school playing field in Salem, where a fine thick turf of Manhattan ryegrass had been established and maintained with very little damage through the entire football season. This was sufficient

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HIGHLIGHTS OF THE ANNUAL MEETING - Continued

to prove that a good natural turf is possible given some limitation on usage; certainly it is more "refreshing" and attractive than any artificial surface yet devised.

The final segment of the tour was through the seed growing areas near Salem, ending at the splendid Jensen Brothers farms north of Salem. Jensen Brothers is one of the largest sod producers in the region, marketing from the Canadian border into California. Because field operations have closed down this late in the season, the touring group was treated to a review of operations at the height of the season by means of a specially prepared movie. The Institute is very grateful to the Jensen Brothers for their fine hospitality on this occasion.

DIRECTOR'S REPORT

An additional six months have passed since Dr. Schery prepared his fiscal year-end report for the Board of Trustees, appearing in Volume 17, No. 2 issue of Harvests. This constituted the main thrust of his presentation to the Board of Trustees, at the deferred annual meeting held in Salem, Oregon, December 10 (adjourned from June). We will not repeat here the resume of Institute activities, which have continued in the same vein as previously reported. But a few of Dr. Schery's comments to the December meeting may be apropos at this time, what with several new officers and newcomers to the Board of Trustees.

Dr. Schery emphasized that the Institute has never experienced affluency enough to permit it to "buy" a position of influence through advertising and conventional public relations; instead it has had to earn its reputation through persistence and hard work. During the Institute's early years fine turfgrass types were distributed to research centers nationally, and attention called to names such as "fine fescue" then having an unfamiliar ring. With contacts and communications established, the Institute has built its reputation by offering its respondents honest information and by avoiding "cheap publicity".

Unfortunately, in recent years the Institute has found itself with a shrinking budget in times of increasing costs. Monitoring the press kits with a clipping service has had to be discontinued, as has been preparation and distribution of widely popular movies. Books prepared years earlier (The Lawn Book, "The Householder's Guide to Outdoor Beauty") are now aging and going out of print; yet the industry has scarcely encouraged publishers to prepare revised editions, either through persuasion or indications of purchase and distribution. Institute members could be helpful not only in matters such as this, but in recommending the Institute for national presentations, conferences, and use of its Seal of Approval.

Recent months have brought both encouraging and discouraging developments. Support from outside of the industry has been diminished by Borden Chemical Company essentially dropping its lawn and garden operations, and by reduced cooperative activities with firms such as John Deere and Toro. But we are fortunate to have had the support of Hercules (and since the annual meeting, willingness of Mr. George Osburn to serve as Institute vice president). With the budget what it has been, the best that has been

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DIRECTOR'S REPORT Continued

possible from the Marysville office has been a "holding action", although we are nonetheless proud of the excellent "mileage" achieved with minimum expenditures. Press kits have gone out on a regular basis, and a continuous flow of stories has been provided the popular gardening press. The photography and literature libraries have been maintained, and reprints widely distributed. Especially rewarding during the year was the widespread willingness of editors to include the Institute's name and address in various stories offering reprints on favorite lawngrasses upon receipt of a stamped envelope; many, many requests were received on this account, and from Dr. Schery's appearances on occasional radio shows making similar offer. The Institute continues to stress such proven and successful lines of activity, and to make its presence felt as lawn seed and lawn product force.

PLAQUES PRESENTED

At the annual meeting held in Salem, Oregon, Plaques of appreciation were presented by retiring president Carnes to Mr. Edward F. Mangelsdorf and Mr. Edward F. Spears. The plaque inscriptions read as follows:

EDWARD F. MANGELSDORF

President of Better Lawn and Turf Institute 1962 - 1968. In appreciation of his enthusiasm and outstanding leadership.

COL. EDWARD F. SPEARS

Founder, Charter Trustee, Executive Committee, Better Lawn and Turf Institute, 1957 - 1971. In appreciation of many hours, unswerving enthusiasm and inspiration to others.

Mr. Mangelsdorf telephoned his appreciation at being so honored to the Marysville office, and asked that each and every member of the Institute be thanked for their fine cooperation during his several terms in office. He is grateful for the plaque, which will hang in the Mangelsdorf Seed Company Board Room.

Colonel Spears died in an automobile accident only a few days after receiving his plaque by mail. But already he had responded in his typical unassuming fashion. Under date of December 22, Mr. Spears wrote:

"Your letter kind of bowled me over when you mentioned the ceremony about the awarding of a plaque. Of course, I feel very much honored but do not know why I should have it any more than all the rest of you good people who supported the Institute."

and again on December 23:

" --- the plaque arrived in the afternoon. In reading it, I think they must have been talking about someone else as I do not think I did all of those things to deserve it. To whom should I write to extend my thanks?"

We take editorial license here to thank all members of the Institute in behalf of these two fine gentlemen, who were very appreciative of the thoughtfulness expressed by these mementos. Speaking for the Institute, the plaques are but a small token for the many hours of effort these gentlemen have extended to keep the Institute functioning; the feelings they symbolize are heartfelt, from officers, board members and staff alike.

TRUSTEE DIES

We were deeply saddened, and the Institute lost one of its finest supporters, when Colonel Edward F. Spears, Paris, Kentucky, died in an automobile mishap near the entrance to his home on December 26. Apparently suffering no serious injury, Ed was hospitalized with high hopes, only to suffer death the following day from unsuspected internal injury. Colonel Spears was one of the founders of the Institute, and the sole charter trustee still serving on the Board until the time of his death. Colonel Spears had just been re-elected a member of the Board of Trustees at the recent annual meeting in Salem, Oregon. His enthusiasm and helpfulness will very much be missed.

PLAYBILL FOR THE FUTURE

During the quarter several stories were composed for future publication. Included are items to appear in Home Garden, Flower and Garden, Golf Superintendent, Horticulture, and other magazines or Proceedings of conferences. A brief resume follows:

"Facile Lawn Renovation" deals with the use of new equipment, new methodology and good grasses for remaking the lawn without plowing up the old. The "game plan" is discussed, followed by "chemical knockdown", "mechanical treatment", "overseeding", and "final measures" topics.

"About Those Lawn Fescues" is a review intended to acquaint the neophyte with fescues that "are almost always found in the better lawnseed mixtures, and are usually the 'hardest working' grasses in the lawn." It is hoped that the name "fescue" can be made more of a household word.

Along the same line is a story tentatively entitled "Fescues Are Fine"; it refers to the fine-textured nature of the Festuca rubra species, and its particular usefulness in the modern-day lawn.

"Perspectives on Golf Green Fertilization" deals mainly with the considerations a golf course superintendent might have in setting up a program, but of course mentions many grass types and their particular demands for nutrients.

"Top Turfgrasses, Their Cultural Quirks" is a review of the major turfgrass species used nationally. Northern grasses cited are the Kentucky bluegrasses, the fine fescues, the colonial bentgrasses, the creeping bentgrasses, and the perennial ryegrasses. Varieties of each are discussed.

"Grasses For Turf" was prepared for the Oregon Seed League Meeting, and will appear in the Proceedings of that conference. The increasing importance of special varieties is discussed, and the trend towards proprietaries noted.

"The Essentials for Roadside Vegetation" was prepared for the annual meeting of roadside landscape architects, and will appear in the Proceedings of the Ohio Short Course.

"The Changing Lawn Scene" deals with the philosophy behind modern lawns, and the confrontation now being experienced between technology and the regard for ecology. The way in which modern turfgrass varieties are developed receives major attention, and fertilization and mowing are reviewed as they relate to the particular kinds of grass.

TURFGRASS REVIEW

The Institute was asked by Rex Warren, Executive Secretary for the Oregon Seed Growers League, to prepare a presentation on "Grasses For Turf" for the 30th Annual Meeting of the League in Salem, Oregon, December 7. The paper prepared by Dr. Schery for this occasion will eventually appear in the Proceedings of the meeting, usually published before summer of the year following.

Dr. Schery pointed out that "there are ecological niches where some opportunity may exist for almost any cultivar. --- From roadside to urban park, from ski run to patio, there are new habitats to be clothed with green." Some of the "improbable" grasses which have found use for turf were cited.

Schery speculated that the important turfgrass species of the future would not differ greatly from those presently used, but that the cultivars (horticultural varieties) would be vastly different. This is an era of great interest in specific cultivars for specific purposes, while the proven grass species have already found their general place. The qualifications for a "good" turfgrass were explored, but it was suggested that beyond inherent qualities there is the need for intensive sponsorship. Without promotional efforts a new selection has difficulty gaining a market in competition with the many other excellent cultivars now available.

Dr. Schery stated, "Obviously, this calls for skilled professionalism in the background, --- the grass must be adequate in at least the majority of traits mentioned --- preferably outstanding in several. --- But even when a selection passes muster, there is an added requirement. Almost surely it will have to be a proprietary in order to justify the interest that will be needed to launch it well in the market place." Likely this will be of benefit to the industry in creating a wider market, with greater recompense to both grower and marketer. And the public should benefit from tailored cultivars giving superior performance. We can expect lawn landscaping to take its place along side outdoor decoration with flowers and shrubs. Dr. Schery feels that the industry will need a vocal and knowledgeable educational arm to inform the public on all aspects of lawn tending which alone can result in the best performance of lawngrasses and their attaining highest public respect.

TIME-LIFE VISITORS

Adrienne Conden and Vilet Harris, of Time-Life, New York, visited the Institute in early November for discussion about the forthcoming lawn and groundcover book being published by Time-Life. This will be the fourth in a series, immediately preceded by one on roses. None of the books in this gardening series have yet been released, but the "closing" on preliminaries with the lawn book was scheduled for December. Misses Conden and Harris indicate that the literature supplied through the Institute previously has been most helpful in organizing the presentation; they are now mostly in the process of gathering suitable color illustrations. The book will be primarily a picture book, with extensive explanatory captions, built around a series of three "essays". A professional horticultural writer has been engaged as consultant-editor.

THANKS RECEIVED

George Jecmen, editor of the Edison Employees' Garden News, utilizes Institute releases frequently in his "Commonwealth Edison Employee Garden Club" publication issued to a wide audience in northern Illinois. We are pleased to have had three stories in the summer issue and another in autumn. Invariably credit is given the Institute. Advice such as "First order of business is re-seed bare spots and bolster thin turf", "Kentucky bluegrass usually holds up slightly better than fine fescue. At the Lawn Institute we have held Highland bentgrass for years ---", and "Mow bluegrass - fine fescue tall enough to retain ample green foliage --- (bluegrasses such as Fylking, Merion and Pennstar can be mowed relatively low; also Highland bentgrass ---)", certainly bring Institute interests to the attention of Jecmen's readers. Issues of the "News" run up to about 30 pages.

We are gratified with this use of Institute materials, and the appreciation editor Jecmen exhibits in a recent letter: "It is a pleasure, indeed, to address this letter to you --- enclosing --- copy issued from your office --- bearing the authenticity that it does; --- we aim to include only such information as is presented by top, recognized authorities --- more likely accepted by the readership. --- Proven by letters of thanks and recognition in the News. Please keep the copy coming --- I eagerly look forward to such cordial relationships." We think this is a pretty good testimonial for Institute effectiveness.

STORIES FOR ASTA SUPPLEMENT

Upon invitation of the lawn and turfgrass division of the American Seed Trade Association, the Institute has been invited to prepare a series of lawn stories for the spring "Supplement", a sponsored clip-sheet to thousands of newspapers nationally. Five illustrations with captions have been requested also, from the Institute's photographic library. The Supplement is issued through a Washington, D. C. public relations house. This is a valuable extension to the Institute's own spring press kit and other educational activities, at no cost to the Institute other than staff time.

Subjects covered include grass for athletic fields ("The competition --- has caused seed companies to come up with special athletic field seed blends that really do a job. The traditional tough-under-foot natural bluegrasses and bermudagrasses are being backed up now with selected varieties, --- things like low-growing and especially hardy bluegrasses, compatible fescues, and fast growing perennial ryegrasses. Colonial bentgrasses still serve admirably --- and creeping bentgrasses make the finest golf greens."), Spring Lawn Chores ("Seed spread over the lawn at a light rate offers some assurance that there will be lawngrass to compete with the crabgrass and other weeds ---"), Making A New Lawn ("About three pounds of Kentucky bluegrass - fine fescue blend is all that is needed for a thousand square feet, only half this much of tiny seeded varieties such as Highland and other colonial bentgrasses --- The new perennial ryegrasses are not only attractive, but sprout quickly ---"), Lawnseed Suited to All Tastes ("There are excellent new cultivars of the same grasses which were the 'greats' of yesteryear, ---"), Advice On Renovation ("It's an easy way to introduce some sparkling new grass varieties into an old lawn --- the tiny seeds of bluegrasses, fescues, bentgrasses, perennial ryegrasses --- sift through to the soil niches where they have a good chance to start life."), and several short items for use as fillers.

COUNTER-REACTION

It is pleasant to find in the September-October issue of The Gardener (Men's Garden Clubs of America), an editorial discussion ("The Gardener's Cupboard") commenting upon the current hysteria about things chemical. Sound reasoning indicates that really toxic products should be eliminated, but that by over-reacting against all chemicals gardening is being made more difficult and high quality often unattainable. The story states, "--- everybody, all of a sudden, is an expert on all phases of environmental toxification. And the gardener's cupboard is going to suffer!" Then the various needs through the season are itemized. The text continues, "But most of us haven't time to do the hand work, and in some cases, hand work won't do the job. We cannot get along without that cupboard."

The discussion concludes, "But the present system of evaluation, tied directly to agencies affected by the popular hysteria, prevents these new preparations from reaching the gardener's cupboard. --- Reasonably safe replacements are barred from the market, which is all wrong. --- Ask /your governmental representative/ if they want to leave their marble halls and pick beetles, moldy leaves and crabgrass in your garden. Let's give the gardening chemicals industry a chance to supply our cupboards with up-to-date materials that minimize danger to the environment, and let's use them according to instructions so a perfectly good chemical does not get blamed for our errors."

GARDEN COLUMN

We were pleased to see Institute information appear in George Abraham's Green Thumb Column, appearing in Columbus, Ohio October 18. The discussion is based upon the Institute answer to an inquiry about a yard in which soft maple trees were "taking over", their roots becoming an inconvenience to mowing. Suggested as possibly helpful were the addition of one or two inches of topsoil, and replanting "to a lawnseed blend containing fescue varieties such as Chewings, Illahee, Pennlawn, etc., since these are among the more drought and shade tolerant of the fine turfgrasses."

TIME-LIFE BOOKS

Indication of further progress in the mock up for possible publication of a book on lawns, by Time-Life, Rockefeller Center, New York, comes from telephone consultations by Margo Dryden. Miss Dryden read over the telephone several passages she had written, for verification as to their correctness. Although Time-Life had previously been supplied an extensive series of Institute reprints, new items (Landscape Turf, New Era Dawns For Bluegrass, Kentucky Bluegrass: Turfgrass Par Excellence, New Lawngrasses and Their Fertilization) were sent. It appears that Miss Dryden is convinced of the broad usefulness of quality, fine-textured grasses instead of coarse kinds.

WEEDS TODAY

In the previous Harvests mention was made of the newly published popular journal under the auspices of the Weed Science Society of America. Inquiry has been received as to how a subscription may be entered. An announcement indicates that Weeds Today can be had from New Science Publishing Company, 3540 Summer Avenue, Memphis, Tennessee 381224, at a \$4.00 annual subscription price.

MORE GRASS SEED PUBLICITY

The January issue of Flower and Garden Magazine carried the story "What's In A Bag of Grass Seed". The advice given is "How to interpret information on a label". Mention is made of the USDA Bulletin 169 on the subject. We are pleased to see information repeatedly appearing in Institute releases, e.g.:

"--- remember that fine-textured grasses such as Kentucky bluegrass and fine fescues have many more seeds to a pound than coarse-textured grasses such as tall fescues and ryegrass. The fine textured ones are the kind that give a carpet-like, velvety lawn. The coarse-textured ones are usually intended for quick cover, and hard wear situations, but they tend to grow in clumps and have wider leaves and coarser stems. ---"

NEW OUTDOOR LIVING PUBLICATION

A letter from William O. Dannhausen, publisher for the magazine Gas Distribution and Utilization, tells of plans for a book called OUTDOOR LIVING IDEAS. This is being prepared for the gas utilities, as encouragement for outdoor living. Naturally the heating of swimming pools, cooking and lighting will be mentioned, but also discussions on the care and planting of the grounds. Mr. Dannhausen asks, "Your comments and suggestions would be sincerely appreciated at an early date." A chapter featuring lawngrasses and their planting have been offered Mr. Dannhausen.

REPRINT FOR NURSERYMEN

The story New Lawn Varieties, done for the Forists and Nursery Exchange, was reprinted in October for distribution to members and for those especially interested in the nursery trade. The story comments upon the new outlook that includes landscaping the lawn as well as with woody ornamentals. It mentions, "Kentucky bluegrasses and Oregon fine fescues have long been the lawn mainstays for the northern two-thirds of the nation". A lengthy discussion follows under the heading, "Fine Fescues From Oregon". The currently available named varieties are listed and discussed. A discussion of Kentucky bluegrasses follows, then bentgrasses and perennial ryegrasses. The story states, "Highland and Holfior colonial bentgrasses are modest in their requirements --- Astoria is a colonial type similar to Highland, Exeter a newer selection from Rhode Island". Penncross is cited as "a vigorous creeping bentgrass from seed, developed especially for golf greens."

MORE ON ARTIFICIAL PLAYING SURFACES

This from Scope, newsletter from the Intertec Publishing Corporation. "NEW PROBLEM FOR TURF: BUBBLE-GUM. Tom Shackelford, landscape architect at Kansas State U. where they have a new synthetic turf athletic field, mentions bubble-gum as a big maintenance problem. Players chew it, he says, and it takes a man with a small brush to clean it off the 'grass'. Shackelford estimates cost of maintaining turf is about the same, whether it's natural or synthetic. But he named heat build-up as a big problem with synthetics, cites a 147 degree playing field on a 97 degree day, says methods for cooling surface must be developed. ---"

STORY FOR BUILDINGS MAGAZINE

A story entitled "Lawns in Landscaping" was sent to Arthur S. Green, professional writer preparing a series of outdoor items for Building Operating Management magazine. It points out the increasing importance of turfgrass in the landscaping of city as well as suburban properties. Grass' contribution to pollution abatement, and the usefulness of new varieties for landscaping effect are emphasized. A few quotes from the story:

"The favorite all-time lawn species continue to serve well around buildings, --- The Kentucky bluegrasses for good soils in the sun, the Oregon fine fescues as a bluegrass companion and for shaded or poor soil sites, colonial bentgrasses such as Highland for humid climates, ---. But the plant materials available within these groups have been enlarged greatly. Take for example the Kentucky bluegrasses and the fine fescues. Scores of new, specialized varieties are already on the market or very soon to appear, ---". There follows a discussion with the naming of varieties of both bluegrasses and fine fescues.

"Colonial bentgrasses such as Highland, Astoria and Exeter are more erect and open than are the creeping bentgrasses, and, indeed, are proving adapted for intermixture with low-growing bluegrasses such as Fylking. --- The creeping bentgrasses, of which Pennncross is an outstanding variety that can be started from seed --- The many fine turfgrass varieties available today --- add new scope to the art of landscaping buildings --- the esthetic and environmental wants outdoors must be satisfied just as fully as functional space indoors."

STILL ANOTHER LAWN BOOKLET

Word comes from John Bradshaw, Ontario, Canada, of preparation for a lawn booklet "which promises to have very wide distribution in Canada and the United States." John has written the Institute asking for both color and black-white photos with which to illustrate. With the Institute photography budget as limited as it is we cannot give carte blanche permission to others to use the Institute photo files, but we do cooperate with the loan of a few appropriate views, especially if they picture the particular grasses in which the Institute has interest. It is necessary to be cautious, also, lest photos appear in commercial (or advertising) publications that might not reflect creditably upon the Institute.

BORDEN CLOSES COLUMBUS OFFICE

Borden Chemical Company, a fine supporter and good friend of the Institute in recent years, has closed out the Midwestern activities of its Smith-Douglass lawn products division. The Columbus plant and administrative offices will be discontinued, and Nutro products no longer offered except in a limited area on the east coast near Norfolk. Borden activities in the last several years have been quite a boon to the Institute, and we will miss the fine support and confidence elicited through Mr. J. R. Stiffler, former head of the division (who will now become president of Chesapeake Advertising Agency).

FESCUE STORY

The "BulletinBoard Suggestion" in the October 9 Seed World was "Fashionable Fescues", the Institute story about why, "The fine or red fescues --- are among the most popular lawngrasses in the nation."

The story continues, "Fescues are much used in bluegrass blends to provide durable cover where the growing is difficult. Fescue usually claims that part of the lawn too hard for most species to handle --- in shade under trees, where the soil dries out, where fertility is poor. Any good lawnseed blend should contain a liberal sprinkling of fescues to take advantage of this tenacity. This would seem enough of a recommendation, but fescues have still more to offer. --- The thin, dark-green leaves are as elegant as those of any fine turfgrass."

LAWN GRASS GROWTH REGULATION

An announcement in the October issue of HortScience indicates that a grant of \$41,500 has been made by General Foods for the first year, in support of research on growth regulation of lawngrasses. Dr. Daniel of agronomy, along with professors from horticulture, will administer the program. This appears a surprisingly large grant for an endeavor which heretofore has not proved successful; almost invariably when the grass is retarded, weeds or later-sprouting vegetation gain an advantage.

STILL ANOTHER LAWN BOOKLET

Bob Conner, Popular Gardening, New York, telephoned asking for illustrations for the lawn section on the magazine's year-end "Complete Gardening Book", authored principally by Cory Kilvert. Thirty-three photos were sent for selection of appropriate views, including a goodly number of the individual grasses represented within the Institute. It seems as though "everyone is getting into the act" with a lawn book these days!

IN THE AVANT GARDENER

Horticultural Data Processors, publishers of the Avant Gardener, credit the Institute in the August 1 issue. Part of the item also recommends bentgrasses for special use, viz. "--- for steep slopes and water channels, Highland and Penncross bentgrasses make virtually impervious erosion-preventing mat ---".

LAWN PRODUCTS AUGURY

"Projections", the newsletter from Buildings magazine, reports in its November-December issue a strong surge in new building. Not only is there a backlog of individual home building in the cards, but major corporations, investors groups, and institutions are all becoming interested in land holding and development. A surge in landscaped grounds in the years ahead seems a certainty and augurs for a strongly increasing demand for lawnseed and lawn products.

MEN'S GARDEN CLUB STORY

The story New Lawngrasses and Their Fertilization, from the Gardener (official publication of the Men's Garden Clubs of America), was reprinted for Institute distribution in October. The item emphasized the fast-changing pattern in development of new fine-turf varieties. Of course for best performance their specific fertilization requirements should be met. Slow-release (ureaform type) products are suggested as a modern attempt to meet specific turf needs. It is stated that the new disease-resistant cultivars permit a heavier fertilization schedule, "and lawns of Fylking or Pennstar can be maintained dark green and forced to lush growth all through summer --". A tabular insert lists bluegrass varieties that usually perform best when generously fertilized, and those bluegrasses and fine fescues which are well adapted to only moderate fertilization.

SERIES FOR CONSTRUCTION FIELD

Arthur S. Green, Beverly Hills, California, correspondent for Building Operating Management magazine, has written the Institute for cooperation in preparing a series of stories for the magazine (formerly Building Maintenance and Modernization). The features are concerned with landscaping and grounds maintenance, and total four or five individual presentations. Perhaps most appropriate to the Institute and its objectives, is article 4, "Planting Selection". From time to time Dr. Schery has provided stories for this prestigious trade publication.

OCTOBER 23, 1970 SEED WORLD

Can Lawns Lick Pollution?, an Institute release given by-line credit, appeared in the October 23 issue of Seed World. Readers are reminded, "So parks, patios, and roadway medians planted to such hardy grasses as bluegrass and fescue are an especial blessing in the city --- City lawns and ornamentals help with pollution control in several important ways."

SUPPLEMENTARY REPRINTING DURING THE QUARTER

During the quarter new reprintings of the following stories were issued for special distribution:

"Establishing a Lawn", from Southern Gardens; "A New Era Dawns For Bluegrass", from Flower and Garden; "Lawns and Turfs in the United States and Europe", from the Oregon Seed League Proceedings; "Fashionable Fescues", from Seed World.

HOMEOWNERS ENCYCLOPEDIA PLANNED

A letter from Allan Carpenter, President of Carpenter Publishing House, asks for Institute material that might be used in a planned Complete Illustrated Homeowners Encyclopedia, being done for the J. G. Ferguson Company. The Institute forwarded source literature for Mr. Carpenter to draw upon, and Dr. Schery has offered help in custom composition or proof reading.

INSTITUTE AGAIN ASKED TO PREPARE SUPPLEMENT MATERIALS

The Institute is always glad to furnish text for the ASTA sponsored "Supplement", going out as a clipsheet to thousands of selected newspapers nationally. It presents a chance to reach a wide audience at virtually no cost to the Institute. We are most grateful to be invited again to prepare the lawn materials for the 1971 Supplement, being organized by Bob Falasca as 1970 draws to a close. Because of this cooperative effort, we think you will be seeing a lot of fine lawnseed publicity in your local newspapers come spring.

18th ANNUAL LANDSCAPE AWARD

Dr. Schery, in behalf of the Institute, was invited by the American Association of Nurserymen under the honorary chairmanship of Secretary of the Interior Walter J. Hickle, to attend a luncheon in Washington, D. C. October 21 in honor of the recipients of the 18th annual landscape awards.

BLUEGRASS IN SEED WORLD

We are pleased that the September 25 issue of Seed World carried the Institute story, Keeping Green With Bluegrass, with Lawn Institute by-line. Key lines state, "Bluegrass blends planted in autumn grow exceedingly well --- Bluegrass seedings are best sowed in a loosened soilbed --- A damp seedbed and bright autumn days make bluegrass mixtures sprout quickly."

REPRINTS REQUESTED

Berger & Plate, San Francisco, having noted the reprint offer in Florist and Nursery Exchange Magazine, asked for multiple copies of Institute literature for distribution. We are pleased to have this widely influential firm "spread the good word".

ABOUT ARTIFICIAL ATHLETIC SURFACES

Artificial "turf" has made the financial pages. Editorial comment in the January 1, 1971 Forbes reads: "Speaking of stadiums and things. Someone told me the other day that the famed and spreading artificial grasses --- tough, durable, favorite green and all that --- can't take dogs. It seems the stuff disintegrates when splashed by canine-refined H₂O. Isn't it comforting to know plastics haven't 'solved' everything!"

CONTRIBUTION RECEIVED

We are very grateful to have received a donation from the Atlantic Seedmen's Association of \$75, voted at the recent meeting of that group. This will prove of beneficial stimulus to a limited budget.

ANOTHER BOOK ON LAWNS EXPECTED

One book due soon is a paperback from the Universal Publishing Company. Editor Bill Meachem telephoned the Institute to discuss the project, and hopefully to obtain a color cover photograph.

VISIT TO MICHIGAN STATE UNIVERSITY

Within recent years Michigan State University has become one of the leading turfgrass educational centers. A competent staff larger than perhaps in any other state devotes its attention to turfgrass. Taking advantage of "Indian Summer" in mid-October, Dr. Schery visited Michigan State to check the variety trials and visit with the research people. He also spoke before Dr. Payne's turfgrass seminar class, and Dr. Beard's graduate seminar, discussing the Institute and its program. Members who do not have opportunity to visit Michigan themselves, may be interested in some of the research carried on there, and a few of the conclusions. Contrary to what has been the case on the Institute grounds, this has been a good year at Michigan State for fine fescue, but bluegrasses have been sorely tested by heavy infestation of leafspot disease. For testing disease-resistant bluegrass cultivars this was excellent. Nugget is reported to have been outstanding in resisting leafspot, and not far behind were familiar favorites such as Fylking, Pennstar, Merion, the New Jersey hybrids, Warren A-20, Sydsport, Baron, Sodco and others.

Among the leading fine fescues in the ratings this year was Jamestown. Michigan State's own Wintergreen apparently did not perform up to its usual capabilities, although it was good. Erica, Barfalla, Highlight and Dawson were all very good, as was Pennlawn and some of the older cultivars. Sceempter was only fair, as was Ruby. Golfrood performed well, but was weedy (Poa triv and other species brought in with seed?). Scotts C-26 hard fescue was excellent. An experimental red fescue from Pennsylvania (K 8-148) seemed the best among the plots at time of inspection.

Interestingly, when bluegrass and fescue are planted in combination, the population is generally first dominated by fescue, and later by bluegrass, in Michigan.

Michigan State has tried out a number of grasses not commonly used in the United States, such as dwarf timothy and crested dogstail. None of these have given as satisfactory performance as have the conventional bluegrasses, fescues and bentgrasses. Among the perennial ryegrasses, only Manhattan, among those planted, has been very much different from common perennial ryegrass; it is noted for its lower growth, greater density and darker green color.

Michigan State is interested in screening colonial bentgrasses, and has a number under test. Conventional varieties such as Holfior, Astoria and Highland were not very good at time of visit. Bardot, from Europe, provided somewhat denser cover, but at least in some of replicates was segregating rather badly (patches of differing color). Under the type of care accorded, none of the colonial bents looked as well as did the creeping bentgrass varieties, of which Penncross was one of the best (better than most vegetative selections).

Among the major turfgrass investigations undertaken at Michigan State are these: winter injury, snowmold control, winter protection of golf greens, turfgrass shade tolerance, injuries from submersion, breeding new varieties (emphasis currently on fine fescues), roadside turf establishment, sod production (its handling and re-rooting), investigation

(Continued)

VISIT TO MICHIGAN STATE UNIVERSITY (Continued)

of diseases such as Fusarium blight, Poa annua and its control, renovation of turf dominated by Poa annua, golf green care, thatch and its control, high temperature physiology of cool-season grasses, fertilization rates appropriate to differing conditions, pelletizing grass clippings for other usage, etc.

The fine fescue breeding program involves a search for germplasm resistant to leafspot and able to spread better than current varieties by rhizomes. Selection and initial mass crossing has been completed with segregation of the offspring underway. With colonial bentgrasses the search is for a cultivar having disease resistance and sufficient aggressiveness to compete with Poa annua. A hardy fescue (variously regarded as tall or meadow, by differing authorities) has been readied for release.

Cooperative work is carried on between the Crop Science department and the Pesticide Research Center. The latter is an impressive new facility that seemingly could have influence in alaying the current hysteria against useful pesticides. Dr. Schery suggested to Mr. Turgeon that efforts be made to publicize the relative harmlessness of the phenoxy herbicides, which have in recent decades become an essential tool for turfgrass management. Turgeon is currently involved in evaluating Endothall for selective control of Poa annua (timing, temperature, etc. are apparently critical). Control of quackgrass is also contemplated. No practical means for selective removal of bentgrass from bluegrass has been discovered, and this investigation is being terminated.

Michigan State has been active in the NCR-10 program. Part of this program involves standardized bluegrass variety evaluations. In Michigan trials are conducted at East Lansing on heavier soil and muck, and in northern Michigan (Traverse City) on soil that is 91 percent sand. Ratings have been made consistently since 1967, with Merion, Fylking and Pennstar among the leading bluegrasses in 1967; Wintergreen, Highlight and Pennlawn among the leading fescues; Toronto and Penncross leading creeping bents; Springfield and some code selections leading colonial bents.

Fertilization studies have shown that several applications are superior to fewer, and that the quality of Merion advances as total fertilization is increased up to about 10 lbs. N/M annually. Wintergreen fescue was found to improve markedly at between 2 and 3 lbs. of N/M annually, whereas Pennlawn profited from twice this much nutrition.

It has been determined that certain pesticides have an influence on grass growth aside from pest control, probably through their effect upon nitrification and soil microorganisms. Dr. Payne has noted some speed-up of germination with Pennlawn and Wintergreen fescues and Fylking bluegrass (but not with Merion or common Kentucky bluegrass) after exposure to a strong electro-magnetic field. Dr. Beard is continuing past studies involving the physiology of cool-season grasses, their carbohydrate content and protein influences on metabolism. Dr. Payne currently favors occasional alternation of rotary mowing (sucks up floppy blades) and reel mowing (performs neater clipping). Phenyl mercury (PMAS) has given excellent control of snowmold.

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VISIT TO MICHIGAN STATE UNIVERSITY (Continued)

With Michigan said to be the leading sod producing state, it is not unexpected that a good deal of research effort has been directed to sod production and handling. Research report 120, September, 1970, "Sod Industry Research 1969-1970" deals with the subject. A few of the conclusions are: high, infrequent mowing give stronger sod, but necessitate (impractical) removal of clippings. In mixed sod of fine fescue-bluegrass, as little as 30 percent Merion with 70 percent Pennlawn fescue provides sod of adequate strength. Relatively low rates of nitrogen prove superior to high rates so far as sod strength is concerned, with heavy nitrogen fertilization decreasing root and rhizome production. Sod grown on organic soil has proved able to root just as rapidly as that grown on mineral soil in Michigan tests (contrary to some reports from the East). Low mowed sod heats up less than that mowed higher, resulting in less damage during shipping and storage.

GOLF GREEN SOIL MIXTURE GUIDE

A novel book of 93 pages has been issued by the University of California, Agricultural Extension Service (AXT-N113 9/70), entitled A Guide to Evaluating Sands and Amendments Used for High Trafficked Turfgrass. Even where the kinds of sand found in California are not available, a few simple tests should indicate similarity and the book serve as a useful guide as to what the effects of adding various amendments to the sand are likely to be.

The authors (W. B. Davis, J. L. Paul, J. H. Madison, and L. W. George) convey their information by means of a series of graphs. The book opens with a listing and characterization of each of five sand types, and 17 familiar kinds of amendments often used for mixing with sand in development of golf green soils. Four different graphs (reflecting total water, unavailable water, infiltration rates, and air filled porosity are given, for each sand in combination with each amendment (mixed within a range of from 0 to 60 percent, and from a zero to 24 inch depth).

The resulting graphs provide an easy and effective means not only for comparing the different sand bases, but showing which of the available amendments that might be mixed with the sand "do what" for the sand when used in various ways. Knowing what your sand is like, it is a simple matter to look up what amendment, at what rate, mixed to what depth satisfies for water holding, infiltration and porosity requirements.

MORE ABOUT SOD ROOTING

Dunn (now at Missouri) and Engle (New Jersey) report upon the rooting ability of Merion bluegrass sod in the July-August Agronomy Journal. Using sod from several eastern and Midwestern sources, grown both on mineral and muck soils, the investigators found that individual sod lots had much more influence than the kind of soil upon which it was grown. Sod with fewer rhizomes seemed to give somewhat better rooting strength than sod with many rhizomes, and thin cut sod rooted better than thick. No correlation could be found between carbohydrate food reserves in the plants and ability to root well.

TURFGRASS IRRIGATION MANUAL

The Proceedings of the 8th Annual Turfgrass Sprinkler Irrigation Conference, held annually in California, this year June 19-21, was recently received. This, like its predecessors, is an excellent review of "the state of the art" in a part of the country where irrigation is most needed, and perhaps where funds to implement this need are most available. In that the individual presentations vary greatly, there is an unevenness to such a Proceedings, but several of them deal with matters that are fundamental to turfgrass grown anywhere.

An unusual opening paper is by Dr. Victor B. Youngner, on Artificial Turf. This is a good compilation of information well suited to refute any idea that artificial turf is likely to take over generally. Youngner objects to calling it "artificial turf", since no turf is involved; moreover, he finds it "esthetically offensive in some places, and to be actually ugly when used as a natural outdoor setting." But he does see usefulness for synthetic surfacings for indoor installations such as the Astrodome, and for heavily used or frequently changed installations such as tennis courts and indoor golf ranges. He complains that administrators will refuse a reasonable budget for grass maintenance, and then accept the high cost of an artificial installation, on which the interest alone would be many times the cost of maintaining adequate living grass. He goes on to discuss how much, if any, lower maintenance is on an artificial surface; whether the surface is really permanent; whether its safety is illusory; cost per square foot; capitalization; etc.

Subsequent presentations, interesting but not directly pertinent to seed usage, deal with cost of irrigation (figures per unit area are suggested, for differing levels of operation), sources of water for southern California, and a symposium on "Who Should Design Sprinkler Systems" (comprised of numerous papers).

As to New Products and Methods, Sarsfield suggests that the year has brought mainly improvements and elaborations without much that is basically "new". He cites the increasing usefulness of "pulling" pipe into the soil with a mole rather than digging trenches. There also seems to be keen interest in underground pipe that allows slow seepage through minute perforations, more useful for row crops than for turf (but perhaps effective on steep banks and limited areas where surface irrigation is not possible). There is increasing talk of remote control for irrigation, and in Denver irrigation in several parks is controlled by telephone rather than by visit of personnel. Sarsfield looks ahead to the day when irrigation is programmed by computer on the basis of automatic measurements on the site.

Letey, University of California discusses root behavior. His approach is conventional, but interesting data is given to show how roots adapt to flooding and drained conditions by increasing their internal air space. Most plants compensate partially by this means, but rice in particular depends entirely upon it. Letey's results show deeper rooting but fewer roots when large aggregates (such as calcined clay) are used, compared to conventional materials as soil-with-peat. When sludge was incorporated, root performance was similar no matter the basic matrix.

Wind-up of the 65 page volume is devoted to Some Agronomic Factors to Consider in irrigation (which provides some figures on soil bulk density,

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TURFGRASS IRRIGATION MANUAL (Continued)

porosity and conductivity). Irrigation Specifications are reviewed, which may be of interest to those concerned with materials and installation. Report on a Sprinkler Testing Facility, and Water Application are the final two papers.

TURFGRASS IN THE FAR NORTH

If file records are correct, we failed to review the Turfgrass Field Day held in Michigan's upper peninsula (Iron Mountain), in 1969. Some of the conclusions voiced there, follow.

Fine fescues are generally recommended as the basic turf species on the sandy soils this far north. Bluegrasses dominate only on sunny, fertile sites, and when given proper attention. The University suggests 1½ to 2 inch cutting height, even higher for the shade. Chewings, Pennlawn and Wintergreen fine fescues performed well. Tall fescues cannot be used, since they are not winter-hardy this far north. Perennial ryegrasses are apparently hardy, but usually rate more poorly than most fine fescues. Highland bent had excellent rating scores, with an average better than anything else tested, both under irrigation and unirrigated. A few representative scores are as follows (1 is best, 9 is poorest):

	Irrigated	Unirrigated
Highland bent	3.2	3.5
Wintergreen fescue	3.5	4.2-5.0
Chewings	3.6	5.0
Pennlawn	4.0-4.3	5.0-5.5
Rainier	4.5	6.2
Common creeping red	4.9	3.6

As to mixtures, the report states " -- redtop, rough bluegrass, perennial ryegrass, or tall fescue will simply not perform as well at northern Michigan locations because of the severe winter conditions, resulting in severe thinning from low temperature injury. Combinations of bluegrass and red fescue are definitely preferred." In bluegrass comparisons, the researchers conclude, "Merion Kentucky bluegrass is the preferred variety for northern Michigan on turfs maintained at a medium to high intensity of culture. Fylking has excellent quality and possesses additional disease resistance." In visual quality ratings, Cougar and Merion ranked first, followed closely by Fylking, more distantly by Newport, Prato and Windsor. Surprisingly, Park and Delta, both northern selections, had the poorest ratings on these irrigated plots. Where not irrigated Windsor, Merion, Newport, and Fylking were among the leaders. With Park again last.

Fertilizer recommendations were conventional, along the same lines as for the lower peninsula.

TWENTY-NINTH ROADSIDE SHORT COURSE

The convening place for Roadside Landscape Architects is the annual Short Course on Roadside Development, co-sponsored by the Ohio Department of Highways and Ohio State University. The twenty-ninth meeting, held October 5-9 in Columbus - Cincinnati, drew representation from 40 states. The Institute participated fully in this short course, Dr. Schery presenting The Essentials For Roadside Vegetation before the formal sessions at the Department of States building, and the Institute reprints (The New Look in Lawns, A New Era Dawns For Bluegrass, and The Curious Case of Highland Bentgrass) being issued by the Department of Highways to all attendees of the demonstration tour which encompasses the final two days of the meetings.

Monday, October 5, was devoted to registration and visiting the commercial exhibits. Formal papers began the morning of Tuesday, October 6, beginning with a panel discussion of Environmental Efforts of Highways. Larrabee from the Bureau of Public Roads, Washington, D. C. spoke for the sociological viewpoint; Rupert also from the Bureau of Public Roads, for the engineers; Issacson, again from the Bureau of Public Roads, for the landscaper; Haynes, University of Georgia, for plant materials; Smith and Joiner, University of Florida, for "horticultural planning" and natural regeneration; and Murphy, Minnesota Department of Highways, for plant survival and research. It was obvious that the present concern for ecology is influencing highway planning and planting. Greater effort is apparently needed to mesh highway construction with public needs and understanding, especially in urban environments. Of course technology grows more complicated, and includes now the potential use of chemicals to regulate vegetation growth (thus lessening maintenance costs).

Afternoon presentations were a diversified lot, dealing in general with the challenges that modern highway construction brings. Mostly this was about people and parks, views and vistas; only indirectly were roadside seedings involved. The evening banquet speaker was provost from the University of Cincinnati, an historian, who showed that the problems of the universities in the Middle Ages were of the same kind modern institutions are having, and that there have always been "confrontations".

Wednesday, October 7, the program turned more specifically to roadside plantings. Three general papers opened the sessions, followed by discussion of nursery stock for highway plantings (American Association of Nurserymen), choice of trees (Cole Nursery), and chemical preservatives. Afternoon presentations included the Institute's, discussion of the establishment of shrubs and other woody vegetation, the landscaper's role, the control of siltation, chemical growth retardation, herbicide drift, and a conference summarization by the chairman of the Landscape Architecture Department of Ohio State University.

The field trip on Thursday and Friday, October 8 and 9, went to Cincinnati for an overnight, returning to Columbus about 6:00 p.m. Friday evening. Various stops were made enroute, including an inspection of the extensive Cole nurseries and some of the engineering operations in the area. On Friday the new Cincinnati stadium was inspected, after which various types of equipment were demonstrated at the well-known Gate of Heaven cemetery in Cincinnati. Additional stops enroute back to Columbus

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TWENTY-NINTH ROADSIDE SHORT COURSE (Continued)

included herbicidal tests sponsored by Dow, comparisons of mulching materials on a steep embankment, inspection of some roadside parks (and an unusual twin bridge scenic area), and dedication of a roadside park.

All in all the program is quite effective in reaching roadside landscape architects. The Proceedings of the annual Ohio Short Courses, along with those of the National Highway Research Board, are the only two focal points for publication of information in the field. Thus the Institute's presentation, The Essentials of Roadside Vegetation, will appear along with other papers as part of the record when the Proceedings become published within the next few months. Also, the field trip, along with the Tuesday and Wednesday night social gatherings, provides excellent opportunity to meet people interested in roadside seeding. The American Seed Trade Association, represented by Bill Cromer, is a contributor to some of the costs involved with the tour. The Institute has been delighted that through the years Mr. Garmhausen, scheduled to retire next year, has regularly included Institute reprints among the convention handouts. This year each person boarding the bus was given a large envelope furnished through the Cincinnati Chamber of Commerce, that included a litter bag, a map of Cincinnati, a map of Ohio, several historical folders on sections of Ohio that would be traversed, a list of sponsors, booklets on industries of the area, postcards, a review of the interstate highway system, and last but not least the three reprints from the Institute above mentioned.

HERBICIDE DEFENSE

Hercules is to be commended for distributing at the Ohio Roadside Short Course, among other outlets, the very informative "Unpatented 245-T Needs Your Help", by Dr. O. A. Leonard, University of California. This is a documented defense of phenoxy herbicides, questioning the current hysteria that seems likely to prevent the public from enjoying the benefits of a very useful and completely safe group of chemicals.

It is apparent that the FDA tests which called attention to defects in the fetus of hamsters, was so grossly unrealistic as to be meaningless. Quantities of 2,4,5-T administered to the hamsters were over 25 million times the amount that would be consumed by a human (being calculated for body weight) under normal circumstances. Even a fraction of these concentrations would be so bitter and unpalatable that a person could not be expected to ingest them even were they to contaminate a food or water supply.

Dr. Leonard further attests that 2,4,5-T has been widely used for more than 20 years without any reported adverse affects on domestic or wild animals. He himself has frequently spread it upon himself, and gotten it into his eyes and mouth, without any damage. During the period the phenoxies have been in wide use, life expectancy in the United States has increased approximately 8 years, and the usefulness of the products are attested to by their wide adoption in society.

This release is an excellent source of information for use in rebuttal of current attempts at restriction of the use of the phenoxy herbicides. A concerted effort will be needed to counteract the hysteria against herbicides, resulting, it would seem, primarily from the abhorrence of laying the landscape to waste chemically in Vietnam.

TURF ANNUAL APPEARS

The July Park Maintenance magazine carried its usual "Turf Research and Irrigation Annual". This annual presentation suffers because it tries to cover too vast an area, its condensations (of research reports submitted to the magazine) seemingly not expertly done and replete with errors in spelling. But it does provide a glimpse of what is going on in the turf research world.

Among the new fungicides thiabendazole, Benlate and Bromosan seem to be attracting attention. In Rhode Island injury to desirable grass apparently did not occur with thiabendazole, as it did on the Institute grounds. The Annual points out that thought should be given towards substitutes for mercurial fungicides, what with present-day uproar about their contribution to pollution.

Very little that is new was revealed regarding fertilizers and their use, although the Purdue report on IBDU is mentioned. In grass variety evaluation, Park and Cougar bluegrasses performed poorly in Rhode Island because of leafspot disease; best varieties have been Fylking, Merion and Baron. Sodco has been highly recommended by Purdue, where it was developed. Rutgers recommends that a bluegrass variety resistant to both stripe smut and leafspot should be included in all blends offered for high maintenance turf. Several code selections are described, and studies mention on a hybrid of Kentucky bluegrass with Canada bluegrass. Some success is reported with st. augustine grass resistant to "decline". Perennial ryegrass-Kentucky bluegrass combinations are pronounced effective.

Insects increasingly pestiferous include the frit fly on golf greens in the northeast, a bluegrass billbug in New York westward to Salt Lake City, several species of sod webworm and cutworm widely spread, ground pearl in Arizona, and a Poa annua weevil in Long Island.

A soil additive derived from fly ash is being investigated in West Virginia. The effectiveness of green dyes for bermudagrass was found related to the concentration of the material in California studies. Perched water table systems for golf greens, as developed at Purdue University are given attention. Search for a turf retardant in California was not particularly successful.

An experimental crabgrass preventer was pronounced effective by Rutgers, in addition to the standard products on the market. Phytotoxicity with repeat treatments of conventional materials was investigated at Rhode Island. Rutgers researchers found only minor additional value from the use of surfactants with conventional herbicides. Pre-emergence herbicides occasionally retarded Kentucky bluegrass, while in Maryland grass was severely injured by accumulations of tricalcium arsenate.

NUTSEDGE CONTROL

A study by Keeley and Thullen, California, reported in the July Weed Science, confirmed that arsonate (DSMA and MSMA) treatment of yellow nutsedge did reduce vitality in the smaller tubers, and that all tubers from treated plants contained significantly higher concentrations of arsenic. Thus repeated arsonate spraying of nutsedge in a lawn should help control the weed even if not completely eliminating the nutsedge.

MIDWEST TURF FIELD DAY

A report was received in mid-October concerning the Midwest Turf Field Day held September 28 at Purdue University, Indiana. A good deal of attention was given bluegrasses. Blends are still recommended. Experimental cultivars were discussed at some length, and Sodco (a development of Purdue) features reviewed. Cultivars listed in the report, according to their tolerance of leafspot (rating 1 as highest, 10 lowest), is as follows:

<u>Rating</u>	<u>Varieties</u>
1	Sodco, Pennstar, Sydsport, Nugget
2	Fylking, Merion
3	Primo
4	Prato, Newport
5	Park, Campus
6	Windsor, Geary
7	Kenblue, Cougar, Palouse
8	S. Dakota common
9	Delta

Weed control recommendations are not appreciably changed, but the tendency is towards minimum rates. New nitrogen fertilizer sources are under study, as is arsenic toxicity, and the use of growth regulators on grass. There has been some success with Po-San and with Maintain 125, in restraining bluegrass growth for up to 6 weeks.

One of the more serious diseases on bluegrass in Indiana this year was Fusarium roseum. Intensive study continues with modified soils (primarily for golf greens), and plastic underlays to provide a perched water table.

GOOD ADVICE FROM MICHIGAN

Extension Bulletin E-673, 1970, on "Lawn Establishment", Michigan State University, gives this sound advice: "Permanent turfgrasses, such as Kentucky bluegrass and red fescue, should compose a major portion of most lawn turfs in Michigan. Low priced, rapid-growing seed mixtures are generally a poor buy since they may contain large quantities of temporary and weedy perennial grasses which are unsuited for a permanent high quality turf."

The bulletin goes on to advocate blends rather than straight plantings. Several seed mixtures are then suggested, for sunny and shaded areas, for low and high maintenance. Several individual varieties are discussed, including Cougar, Delta, Fylking, Kenblue, Merion, Newport, Park, Prato, and Windsor among the bluegrasses. Among the fine fescues, Pennlawn and Wintergreen are considered slightly superior, but Chewings, Rainier, Illahee, Olds and Trinity are all mentioned, too. Bentgrasses, Poa trivialis, and ryegrasses are suggested only for special purposes. Tall fescue, zoysia and white clover are considered unadapted to good lawns in Michigan.

NEW LAWNGRASS TEST

Better Crops With Plant Food, number 3 - 1970, recently received, carries an adaptation of a Rhode Island report by Coorts, Monroe and Ledebauer, entitled "How Much Does K Strengthen Grass Blades". Perhaps more interesting than the K data reported, was the testing technique of measuring the tensile strength of leaves (blades) of Kentucky bluegrass. It is hard to see how this would be any improvement over visual ratings usually given, but perhaps it is indicative of proper fertility balance? Merion bluegrass grown with ample potassium had a higher tensile strength than when the potassium supply was low. Interestingly, the data reported show that no matter the fertilizer regimen, Merion bluegrass in April was "stronger" than the same grass in May or June. When it comes to mowing the lawn there would certainly seem to be no advantage, and perhaps a disadvantage, from a high tensile strength in the grass leaf that K contributes to!

BLUEGRASS POLLEN GERMINATION

Research by investigators in Washington, reported in the July-August issue of the Agronomy Journal, showed bluegrass pollen to germinate effectively only early in the morning. Between 6 and 7:30 a.m. pollen germination exceeded 80 percent, but declined to 50 percent by 8:00 a.m., and less than 2 percent by 9:00 a.m. The rest of the day there was no measurable germination. It would look as though fertilization is an early morning affair with Newport Kentucky bluegrass.

PHOSPHORUS INCREASES PHYTOTOXICITY

A report by Selman and Upchurch in the September issue of Weed Science indicated that greater phosphorus levels in the soil increased phytotoxicity of amitrole and sometimes diuron, to numerous test plants that included ryegrass among the turfgrass types. This is in contrast to the well-recognized nullifications of arsenic toxicity in the soil by phosphorus (such as when calcium arsenate is used for crabgrass control).

DRYNESS FAVORS UNDERGROUND PLANT PARTS

A study in New Zealand, reported in vol. 51, no. 5, Ecology, indicates that various herbs produced a higher proportion of below-ground dry matter when growing in drier habitat as compared to moister habitat. The same was true for the grass, corn, comparing droughty portions of a field with moist parts. Although no turfgrasses are involved in the study, if the generalization applies one would expect to find higher root-to-shoot ratios for turf subjected to drier conditions.

"THATCH" DECOMPOSITION IN WINTER

That there is significant loss in organic materials from spent vegetation is confirmed by a study conducted in Utah by A. T. Bleak, reported in vol. 51, no. 5 of Ecology. Disappearance from late fall to early spring, while under a cover of snow, averaged 30 - 40 percent for grasses studied, and even more for Dicotyledonous species. This certainly suggests that lawn thatch should become somewhat diminished through winter, a period during which there is little accumulation of new foliage.

OREGON SEED GROWERS LEAGUE

The 30th annual convention of the Oregon Seed Growers League included a number of presentations of a technical nature. A few may be of interest to members, and are summarized here even though full details will appear in the Proceedings. Many discussions were devoted to the field burning question, but will not be reviewed since this is mainly a regional matter and more socio-political than technical. Sponsored research at Oregon State University has developed a field burning machine using propane fuel, which, however, to judge from the pictures shown is still an ungainly device and far from being a practical working model. Finding commercial (or mildly subsidized) use for the straw would appear to be one of the more efficient ways of handling the problem, and Dr. Chilcote is following leads on this.

Dr. Orvid Lee, stationed in Oregon State University, spoke about weeds in seed crops. Considerable progress has been made in using bands of charcoal slurry along the seed planting rows, to inactivate there pre-emergence herbicides which control weeds elsewhere. The method has been pretty well proven, but there are still occasional difficulties such as with mixing charcoal easily into water for spraying behind the planter. It has been found that the use of wetting agents is not good because they tie up the absorptive sites on the charcoal and reduces its effectiveness. A number of herbicides prove effective, but clearance so far is only for diuron (2-3 lbs./A). Diuron provides a good safety margin, while compounds such as atrazine are much more risky. Paraquat has proved useful just before emergence. Lee would have predicted mixing of charcoal with liquid fertilizer to have de-activated the charcoal the same as does a wetting agent; but when this was tried by operators it proved effective, contrary to expectations. The charcoal method of weed control requires a good deal of precision, including clean fields where there will not be interfering debris. Diuron is effective on fine textured soils with a seedbed free of organic materials. It is not effective against all weeds, including small grains and wild oats. Hyvar-X and sinbar, although not registered yet, have proven effective for bluegrass, eliminating *Poa annua* well. Arsonates have proven useful against wild oats. There are various other specifics, but it is increasingly difficult to get registration because of the current concern about pollution. Indeed, Lee reports that many manufacturers are losing interest in developing herbicides, since with the many restrictions it becomes almost impossible to recover the several millions of dollars needed to develop, register and launch a new product. A definite slow-down on products received for screening by OSU has been noted. Incidentally, it is said that sinbar at 5 lb./A eliminates quackgrass well from mint.

Dr. Rad Roberts, an entomologist at OSU, spoke about seed crop pollination, especially of legumes. He indicated that it was too cold in western Oregon for the leaf cutter and other wild bees to exist, which are effective pollinators in California and eastern Oregon. Therefore it becomes essential to encourage the honey bee and the bumble bee, which are especially effective pollinators of clover, cranberries and so on. Special strains of bumble bees are being bred at OSU, and methods for rearing them in the laboratory have been developed (although the costs are too high for practical applicability, considering that 90 percent of the bees disperse to other areas when released). Practical techniques recommended are to locate seed fields near borders of natural vegetation and uncleared fence rows which are the normal nesting areas for bumble bees. The bees nest in places very similar to those that mice might use, and additional nesting sites can be

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OREGON SEED GROWERS LEAGUE (Continued)

provided in mounds of old burlap, mattresses, and so on. Roberts feels that two hives per acre are needed for a good pollination. He suggests avoiding the use of insecticides at times of day when the bees are active, and in areas where the bees nest. At the time the queen bee emerges it is well to have some plants in flower. Interestingly, mild doses of pesticide may not kill the bee, but will cause his communications dance to go awry, giving "false tips" to other bees in seeking out sources of nectar. Most of the time insecticides applied late in the day, after the bees have gone to the hive, have dissipated enough overnight so as not to be harmful the next day. Dusty insecticides are the most hazardous, because the bees pick up the particles and carry them back to the hive. Roberts confirms what Lee had previously said about pesticides, that fewer products are coming along for screening, and that with restrictions there is now nothing really good to recommend for soil insects like root weevils.

Robert Dye, a major producer of bluegrass seed in Pomeroy, Washington, spoke about competitive aspects within the industry which provoked great interest in the audience. Dye feels that measures for smoke abatement are coming in all of the Pacific Northwest, and that costs are therefore going to rise. But in the Palouse region of Washington the competitive factors may be a little bit more favorable than in the Willamette valley of Oregon. Only one percent of the available land is now being used for seed production in the Palouse area, and increasingly crop rotation with grass is being undertaken for its influence upon subsequent wheat crops, even when grass seed is not much of a money maker. It may be that a short rotation, without any field burning, will prove an acceptable technique in his area, and become the accepted means for bluegrass seed production (with the field remaining in bluegrass only three or four years). But certain cultivars can be more efficiently grown in other climatic areas than in the Palouse country, says Dye, and he looks for specialization (after proving out what each cultivar needs) in the growing of various named grasses throughout the West. From the competitive standpoint he is more concerned with northern Minnesota, than with the "wild" stands in South Dakota - Kentucky. Even though the latter are subsidized by cattle production, yields are not sufficient to be very competitive with agricultural growing. But in northern Minnesota available land is abundant, and much less expensive (therefore less capitalization) than in any other producing area. Moreover, if burning restrictions are enacted it would be a simple matter to slip over the border into Canada where such restrictions do not presently apply.

Dr. John Hardison, pathologist with the USDA, stationed at OSU, spoke on grass seed disease control. Dr. Hardison pointed out that field burning is still the only practical control for most seed "diseases", including seed nematodes in established stands, silvertop (probably an insect-fungus interaction), and to a greater or lesser extent various stem and leaf diseases. Hardison pointed out that field aftermath often contains substances toxic to livestock, another argument for burning of field trash. Ergot is one such. A good systemic fungicide might prove useful in effecting seed field disease control. However, to this point nothing effective has been developed which might be applied to the foliage; rather systemics must be absorbed through the root system, making the treatment uncertain and uneconomical. DuPont's benomyl has looked very promising, but at a cost of around \$17 per pound, and the need for at least 2 lbs. per acre, the expense is prohibitive. The material has proven effective in controlling the apothecia for blind seed disease.

(Continued)

OREGON SEED GROWERS LEAGUE (Continued)

A number of other interesting reports were given including several of a localized nature having to do with Oregon regulations. Dr. Ritchie Cowan had interesting observations on seed production throughout the world, following his recent trips to Australia - New Zealand, South America, and throughout Europe. Details on these and other reports will become available in the conference Proceedings.

BLUEGRASS MIXTURES

Juska and Hanson, USDA, Beltsville, discuss the performance of Kentucky bluegrass mixtures in the Winter, 1970 issue of the Turf Bulletin (Massachusetts Turf and Lawngrass Council). Beltsville 117, Belturf, Pennstar, Merion, Common and a Kentucky blend were used in the experiments, both alone and in various combinations. The grasses were moderately fertilized and mowed at 2 inches. For the first two years there was relatively little change in the composition of the mixes compared to initial establishment. Later the more aggressive cultivars gained at the expense of the weaker. For example, Belturf and Beltsville 117, originally about equal in composition, eventually changed to 87 percent Belturf and only 13 percent Beltsville 117. In addition to Belturf, Pennstar and Merion proved to be some of the more vigorous cultivars. Pennstar and Merion tended to dominate Belturf. Leafspot was severely damaging to the common and to the Kentucky mixture. In the general quality ratings mixtures containing Belturf tended to be among the best, and those containing common or Kentucky blend generally had lower ratings. When planted alone the Merion and the Belturf selections were superior, Pennstar of only medium rating in spite of being the cultivar most resistant to leafspot. For further information the tables accompanying this review should be consulted.

*****WHAT THEY ARE SAYING*****

"I enjoyed your presentation at the 29th Roadside Development Short Course. You really did an excellent job of covering the whole area."

Edward A. Hunnicutt
Toro

"Just a note of thanks for the information received recently ---"

Ross Parlette
Cobourg, Ontario

"Thank you for sending the reprint entitled 'New Lawn Varieties'. The article is certainly very well done."

Gordon J. Miller
The Sanford Seed Company

"I have enjoyed using your book ---"

Dr. H. Garrison Wilkes
University of Massachusetts

"Thanks for your annual appearance at the Oregon Seed League meeting. You did a good job talking about 'Grasses For Turf'. We will include your speech in the Proceedings."

Rex Warren, Secretary
Oregon Seed Growers League