

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

Published periodically by
Better Lawn & Turf Institute

Rt. 4, Marysville, Ohio 43040
Phone: (513) 642-1777

Volume 18, No. 1

April, 1971

INDEX

General: pages 1 - 8

Technical: pages 9 - 19

BOOM

Are happy days ahead in lawnseed and sod sales? Scope (newsletter from Intertec Publishing, Kansas City) seems to think so. They mention HUD figures of 26 million new homes, occupying 1400 square miles of living space, with "urbanization" proceeding at the rate of 3,000 acres of land a day, all through the decade of the '70's. Scope feels, "booming business in landscaping services, plant materials, equipment and supplies seems obvious."

NEW TURFGRASS TEXT

Principles of Turfgrass Culture, by Dr. John H. Madison, University of California, Davis, has now been published. A copy was sent the Institute by the editor of the Journal Horticultural Science, for review by Dr. Schery in that publication.

The new book is designed chiefly as a college teaching text, although most chapters have a concluding page or two dwelling upon the ways in which the principles discussed relate to turfgrass management. However, the book will likely prove a little "deep" for all but the serious student.

Dr. Madison is an original and broadly versed student of turfgrass. His breadth of interest is reflected in this book, which carries much technical detail not of direct turfgrass interest (for example meteorological parameters, anatomical systems, etc.). Thus a wealth of data is contained, but perhaps more than the average reader will want to know about all of these subjects. A turfgrass custodian may find it difficult to search out the specific information amidst the far-ranging, theoretical discussions. For the serious turfgrass student, this is probably the best textbook available.

"STATISTICS"

Scope, the news note from the editors of Grounds Maintenance, mention that a bladeless lawn mower is shortly to be introduced (two loosely pivoted, light-weight tines spin to "cut" the grass). Also that 94 million dollars was spent on turfgrass maintenance in Nebraska, 74 million of it on lawns (125 million annually when costs of establishment and service are included).

IN SUNDAY STAR LEDGER

Alice Dustan, garden columnist for Newark, New Jersey, Star-Ledger, kindly sent in a tearsheet showing liberal use of Institute materials on the Sunday, March 14 garden page. Full credit and direct quote is given the Institute. Sample statements include, "Years of turfgrass breeding and testing are now bearing fruit in elite new Kentucky bluegrasses, fine fescues, bentgrasses and perennial ryegrasses --- it has become possible to 'design' a lawn --- some of the strange new names that identify the varieties - Kenblue - Arboretum - Park - Fylking - Pennstar - Sodco - Merion. --- The fine fescues, trustworthy companions for Kentucky bluegrass in blends are progressing similarly ---".

FROM NATIONAL RECREATION AND PARK ASSOCIATION

A letter from Dr. D. R. Dunn, Director of the National Recreation and Park Association Research Department, asks for Institute information for use in a forthcoming yearbook. The yearbook is said to be, "A factual and conceptual tool to stimulate --- leisure opportunities --- a comprehensive statement --- of recreation and leisure services in the United States". A discussion of Institute activities was sent to Dr. Dunn, and an offering made to furnish literature to anyone sending a self-addressed, stamped envelope.

FESCUE STORY APPEARS

The Institute story, "Fescues -- The Hard-working Grasses For Home Lawns" appeared in the March issue of Home Garden magazine. It was well illustrated with five Institute photos, including "A field of fine fescue growing in Oregon", and plugs plus individual plants of both fescue and bluegrass. The article states, "Fescues are almost always found in the better lawnseed mixtures, and are usually the 'hardest working' grasses in the lawn." Reprints have been made for distribution, and to provide the needs of sponsors and the Oregon Fine Fescue Commission.

IN "GREEN THUMB" COLUMN

Correspondence has been hot and heavy with George Abraham during the quarter, fielding questions having to do with lawns for his "The Green Thumb" syndicated column. We are pleased that "DOC" saw fit to give the Institute credit and several mentions in the gardening column which appeared in the Columbus Dispatch, Sunday, February 21. With respect to zoysia, "It won't begin to green up until sometime in May, starts to go off color no later than October --- Kentucky bluegrass --- is green until after Christmas, picks up again in March ---".

NEW TURFGRASS PUBLICATION

The newly organized New Jersey Turfgrass Association has inaugurated the publication of "Green World", expected to be issued a few times annually. Vol. 1, no. 1, was February, 1971, and carried general observations of leaders in the field rather than much technical information. The status of research in several areas at Rutgers University was touched upon by the professors involved, and the final few pages were devoted to the listing of sponsors and members of the association. The publication is intended to carry informational articles of a technical nature in the future.

"TOP TURFGRASSES" APPEARS

The Institute story, "Top Turfgrasses", appeared in the April issue of Horticulture magazine. Illustrations included a lavish color plate by the magazine, and drawings of fine fescue, Kentucky bluegrass and perennial ryegrass from the Institute.

The story opens discussing turfgrass candidates, and noting that only ten species have become widely used, five each for north and south. Kentucky bluegrass and the evolution of its varieties are discussed at length, viz. 'Merion, the first of the new premium breed, is still widely utilized and the standard by which other selections are judged. Fylking is a new cultivar now generally available, notable for its resistance to most diseases and tolerance of low mowing. Other new varieties are Pennstar, much like Fylking, and Baron and Sodco, broader bladed, low-growing selections of deep green color. Many other fine selections will be heard from ---".

As to fescues, "The fine fescues are especially noted for their persistence in dry shade, on infertile soils and on poor or sandy sites --- precisely where bluegrass needs assistance." Fine fescue currently available are named. Discussing the bentgrasses, "At the Lawn Institute Fylking bluegrass with Highland, Holfior and other colonial bentgrasses has performed well when mowed at a half inch or so." And, with creeping bentgrass, " --- if you want the ultimate in fine-textured turf, try Penncross". Also "Perennial ryegrasses --- are experiencing a revival of interest. Newer selections are more attractive --- homeowners may find them useful where a quick yet good looking cover is needed --- In addition to the dark-green, low-growing Manhattan, NK-100, Norlea and Pelo are widely marketed ---".

The story winds up with similar but somewhat briefer discussions of each of the main southern turfgrass species.

LANDSCAPE CAREERS

Mrs. Marjorie Layton, of the Research Department, Chronicle Guidance, New York inquired of the Institute recently, "Dear Dr. Schery: Several years ago we had the privilege of working with you in preparing our occupational brief LANDSCAPE ARCHITECT. --- we are planning a revision --- asking your cooperation and assistance --- briefs are available to approximately three million high school students."

A few suggestions for emphasizing turf were given Mrs. Layton, for amplification of an already well-written brief. We are happy to see still included, the insertion suggested by the Institute four years ago: "Thus the landscape architect should specify the varieties in blends of Kentucky bluegrasses and fine fescues for the lawn, or bentgrasses for a specialty turf, ---".

HIGH SCHOOL REQUEST

A request has been received from Vocational Agriculture and Horticulture teacher, William K. Steele, Owingsville, Kentucky, for educational information on lawns and turfs. Reprints were mailed, and mention made of "The Lawn Book" and "The Householder's Guide to Outdoor Beauty". Mr. Steele also requested information on educational films that could be shown to his students.

PRESS KIT REQUESTS

Detailed information about new grass varieties was offered in the press kit if a self-addressed stamped envelope were sent to the Institute. Numerous papers have carried this offer, to judge by clipping included with requests. Under the headline "Fescues Persistent In Infertile Soil", a Carolina item reads, for example: "Fine fescues are lawn favorites especially noted for their ability to persist in shade and to survive with little attention. They are usually the most persistent fine turfgrasses on dry and infertile soils. Traditional varieties such as Chewings, Illahee, and Pennlawn are now joined by newly bred selections such as Highlight, Jamestown and Ruby. A reprint leaflet giving more details about fine fescues can be had by sending a self-addressed stamped envelope to THE LAWN INSTITUTE, Route 4, Marysville, Ohio 43040."

CONTRIBUTION SOLICITED

In the past the Institute has cooperated with Arthur S. Green, in preparing a series of stories for Building Operating Management. Mr. Green specializes in writing for trade publications. A newly received assignment is for the American Painting Contractors, for a story on recreational turf coatings. "Lawn painting" is of no particular interest to the Institute, but should Mr. Green wish to explore the subject somewhat in depth he has been offered custom discussion on fertilization procedures for best natural color in living turf, maintenance procedures for best texture and color, and the alternative means of achieving winter color in southern turfs by overseeding with northern grasses.

FROM FAR OFF FRANCE

An interesting inquiry was received from Paul Champon, Mesnil-lâ-Roi, France seeking information on contract property maintenance. Unfortunately, the Institute activities relate only remotely to property caretaking on the coast of France! Mr. Champon writes, "I venture to write to you on behalf of the Department of Commerce of the State of New York, which as advised me to apply to you for information concerning the founding of a society for Maintenance and Servicing of houses and gardens in a touristic region". Perhaps this is part of a world-wide trend-of-the-times, and might indicate increasing interest in such things as contract winterseeding of southern lawns?

SEED WORLD PICKUP

We are pleased to note in the December 11 issue of Seed World, publication of the Institute story Artificial Grass Feels the Heat. The discussion deals with athletic turf, particularly with the unduly high temperatures experienced when daytime baseball is played on artificial surfaces as compared to live turf. The story emphasizes, "But there are things that good bluegrass, fescue and bentgrass can do, that no carpet ever could ---". The vital services of living grass are then extolled.

PENNSTAR STORY

The January issue of Weeds Trees and Turf carried an excellent staff story entitled "The Story Behind Joe Duich and Pennstar". This was a personalized account of the historical background for this fine bluegrass cultivar. A good deal of information is given concerning Pennstar's habits, and the kind of management that should suit it well.

ANNUAL TURF ISSUE

The January issue of Weeds Trees and Turf was entitled the "Annual Turf Issue" suggesting that this will be a continuing feature in the years ahead. Almost all of the stories and short items had to do with turfgrass. Reviewed elsewhere are the Institute story on fine fescues, and the magazine's story on Pennstar bluegrass. In addition, Margaret Herbst discussed the information program for Merion bluegrass, Cal-Turf findings on mower design for hybrid bermudagrass were reported, expectations in the golf course world were reviewed, and a number of news items included. So far as turfgrass is concerned, this was an outstanding issue of Weeds, Trees and Turf for which editor Ingalsbe is to be congratulated.

BUILDINGS MAGAZINE STORY

The Institute story, with by-line, "Integrating Grasses into the Landscape", appeared in Building Operating Management, February. Five Institute photographs were used as illustrations. The story opens discussing the "park-like" surroundings increasingly used for commercial and industrial buildings, then reviews the favorite grasses for turfing them. "The favorite all-time lawn species continue to serve well around buildings. They are 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, ---". The offer of reprints is extended in the story to those sending in a self-addressed stamped envelope, and has result^{ed} in innumerable requests.

INFORMATION REQUEST

Mr. William G. Eaton wrote the Institute asking for authoritative information on the history of Kentucky bluegrass. He is preparing an article that may possibly be published in the Agricultural News (the Kentucky Department of Agriculture). The reprint "Migration of a Plant" and other literature was sent to Mr. Eaton. Eaton has checked out old records in the Winchester area, and reports that -- Daniel Spahr, in 1780, noted: "Open spot round. Very grassy. The first bluegrass seed I ever saw came from that place. Not the same kind that grew in Virginia. More productive. Not as clear a green as the Va. and the stem ripens and dies when the head does. While of the Va. bluegrass, the stem is green when the head is dry and ripe."

BLUEGRASS STORY

Bluegrass Varieties Abundant is a Lawn Institute item appearing in the March 12 Seed World. Sample quote: "Kentucky bluegrass is the favorite lawn-grass in the United States, and seedsmen are very much occupied with breeding new varieties --- A few such as Fylking, Pennstar and Baron have already reached the market. --- Almost all are resistant to diseases that have long been the tribulation of lawn owners. Many are low-growing --- which makes them compatible with colonial bentgrasses such as Highland."

"When I Get an Idea in My Head ---

I know I have the whole thing in a nut shell!"

(UBS)

FINE FESCUE STORY

The Institute story, "Lawngrass Extraordinary...Fine Fescues", appeared in the January issue of Weeds Trees and Turf. Two photos from the Institute were employed, taken on the Institute grounds. The story provides a resume of fine fescue history, traits, growth habits, maintenance, propagation, and cultivars (both current, and "for the future").

Sample quotes: "The fine fescues have many attributes marking them as top lawngrasses --- Fine fescue seed --- is abundant enough by the pound to be quite a bargain ---, yet large enough to distribute easily and carry sufficient nutrients for excellent seedling vigor. --- Pennlawn is an especially interesting case. It was bred some years ago from parental selections made at Pennsylvania State University."

The story has been reprinted for distribution through Institute channels, and for use by the Oregon Fine Fescue Commission. It will join the Institute informational file on fine turf species, as revised "Portrait II" in the series handed out when there is inquiry about a particular grass.

NEWSPAPER SUPPLEMENT OUT

Most members have received a copy of the National Lawn and Garden Week newspaper supplement from ASTA. The Institute prepared the various lawn items for this, and contributed illustrations including that which appears on the cover page. This has been mailed to more than 4,000 major daily and weekly newspapers.

Institute contributions to the supplement include these titles: "Planting a New Lawn? Here's How" (14 column inches); "Mix Lawn Seed" (1 column inch); "Lawn Seed For All Uses" (16½ column inches); "Renovate Your Lawn This Spring" (12 column inches); "Ounce of Protection" (3 column inches).

Cooperating with the American Seed Trade Association in issuance of this fine supplement, were the American Association of Nurserymen, The Society of American Florists, The National Swimming Pool Institute, and the Outdoor Power Equipment Institute. Issuance was tied in with National Lawn and Garden Week, March 20 - 26.

SEED WORLD MENTION

The Institute was pleased to have had both the announcement of its annual meeting, and a by-line story, appear in the February 12 issue of Seed World.

The announcement on the Institute's annual meeting carried a complete list of new officers and members of the board of trustees. The announcement concludes "During the coming year the Institute program will remain chiefly educational and will give attention to --- the increasing prominence of proprietary varieties."

The story, carried as a "Bulletin Board Suggestion" was entitled Readying the Lawn. Sample quote: "Seed of high quality rich in 'fine-textured' components is suggested. Such seed does not contain serious lawn weeds, and is of long-lived, attractive varieties ---".

FARMINGTON INVITATIONAL PRESENTATION

Dr. Schery, representing the Institute, spoke on February 24 before the "Farmington House and Garden Symposium" in Louisville, Kentucky, on Building Good Lawns. The "symposium" is a series of six successive weekly presentations by national authorities, "Six distinguished lecturers --- for the benefit of further restoration of Farmington". Farmington is a plantation home built in 1810 according to the design of Thomas Jefferson, being restored to the decor of its time as an historical shrine.

The discussion of lawns was enthusiastically received, Dr. Schery being held an hour past scheduled time for questions and further discussions. Slides were shown depicting grasses and procedures used in constructing a lawn. THE LAWN BOOK and THE HOUSEHOLDER'S GUIDE TO OUTDOOR BEAUTY were offered to attendees, and the reprints "Kentucky Bluegrass: Turfgrass Par Excellence", "Lawngress Extraordinary ...Fine Fescues", "Steps to Assure a Good Lawn", and "Now Lawns" were given out to attendees numbering close to two hundred.

Dr. Schery's presentation opened with a discussion of why lawns are important and so unique to modern America, then reviewed some of the growth characteristics of typical lawngresses, relating them to the climate, soil and means for establishment. The final portion of the program dealt with caring for an established lawn, and a comparison of the turfgrass cultivars available on the market today. Slides illustrated the points.

Judging from private conversation and questions, most of the new turfgrass cultivars are not easily available on the Louisville market! Should this be a clue to seedsmen to provide better retail availability for an increasingly sophisticated and interested buying public?

EARLY SEASON MAIL RESPONSE

The Institute has continued offering reprints discussing Kentucky bluegrasses and fine fescues, upon receipt of a self-addressed, stamped envelope. This offer is extended in the press kit, and whenever feasible in magazine stories. We were pleased to have had Building Operating Management magazine include such an offer in materials prepared for that publication, which have resulted during February in requests for literature from all corners of the country.

It is evident from the inquiries that Building Operating Management is carefully scanned by an impressive group of major firms, who seem quite concerned about property maintenance. Typical examples are requests from the Housing Department of Metropolitan Life Insurance Company, various schools, and the Office of the Commissioner, Department of Housing and Community Development, Baltimore. With requests such as these, Institute literature can be quite influential, at very little cost to the Institute. Almost daily several requests for literature have been received.

TURF BULLETIN USE

Fred Cheney, editor for the Massachusetts Turf Bulletin, requests permission to reprint the Institute stories New Lawn Grasses and Their Fertilization, and Lawns Slow Pollution. We are pleased to have this added coverage.

INSTITUTE PUBLICITY "EXPLOSION"

Numerous requests from colleges, companies and individuals have resulted from the story "Integrating Grasses into Landscape", appearing in Building Operating Management magazine. An offer of literature reviewing new turfgrass varieties is made there if a self-addressed stamped envelope is sent to the Lawn Institute.

Almost daily such requests as these are received: "Could you please send -- a leaflet listing and discussing the bluegrass varieties?" (Omnia Properties Inc., Real Estate Management, New York); ibid from Landscape Planner, University of Northern Iowa; Vice President, Ward Parkway Shops, Inc., Missouri; Engineer, The Cincinnati Union Terminal Co., Prof, Dept. of Recreation Education, College at Cortland, State University of New York; etc.

GOOD PRESS RELATIONS

Gene Rugh, Garden Editor of the Fort Wayne, Indiana News-Sentinel writes, " --- our paper will once again feature a special supplement on Lawn and Gardening. -- We have used your feature material on grass in the past and found it very interesting. --- Thank you again for your past material and we will look forward to receiving new features on grass from you."

REPRINTS POPULAR

A member firm sent a "Please rush" request for 2,000 copies of the Home Garden reprint - "Fescues the Hard-working Grasses for Home Lawns". Another requested 2,000 copies of "New Lawn Grasses and Their Fertilization" (immediately reordered from the printer). A few days later, another request for 10,000 copies of "Perspectives on Golf Green Fertilization" appearing in a recent issue of Golf Superintendent. Several others have ordered smaller quantities of the fescue and bluegrass reprints.

BULLETIN BOARD SUGGESTION

Lawnseed Longevity, an Institute item, was the Bulletin Board Suggestion for February 26 in Seed World magazine. The item opens: "Lawnseed can be kept almost indefinitely if properly stored --- Kentucky bluegrass usually holds up slightly better than fine fescue. At the Lawn Institute we have held Highland bentgrass for years and still found it able to make a good stand."

GARDEN CENTERS BY STATE

The February issue of HortScience carries a tally of the states leading in the growth of the garden supply industry, as part of a study conducted at Michigan State University. California leads both in the number of stores (449 in 1967) and in sales (over \$56 million). Closely bunched as a distant second and third are New York and Michigan, followed by Ohio, Illinois, New Jersey, Pennsylvania, Florida, Texas, Indiana and Wisconsin (all with 1967 sales of \$11 million or greater). In rate of growth during the decade, Michigan leads, followed by Indiana, Wisconsin, Pennsylvania, New Jersey, Texas, and New York, all with sales increases exceeding 200%. The statistics point up how important the garden products industry has become, and should be encouraging as indicative of increasing interest in lawnseed.

SHORT COURSE PROCEEDINGS ISSUED

Proceedings for the 29th Short Course on Roadside Development, Ohio Department of Highways and Ohio State University, was issued in March. The Institute contributed through Dr. Schery's presentation, "The Essentials for Roadside Vegetation". This paper is 15 pages in length, and is embellished by nine photographs and three tables. Among the illustrations is a close-up of Highland bentgrass ("A variety good for damp sites"), individual plants of fine fescue and bluegrass ("Two fine-textured stalwarts for the roadside"), field harvest of Kentucky bluegrass in Kentucky, new low-growing bluegrass varieties ("Newer fine-turf varieties may find a place on the highway berm. The Fylking plug here exemplifies the breed of low-growing bluegrasses"), and other photos relating to the response of fine turf from fertilization ("Autumn fertilization of bluegrass-fine fescue. Note the thick, yet low turf at this season, ---").

This Proceedings is 209 pages long, with 15 pages listing the Short Course registration (with both name and address; a handy means for keeping track of those active in the field). One lengthy section is devoted to state-by-state reports, with representatives from the various states providing their "state's activities" presentations. Forty states were represented at the conference, plus Canada, China, Pakistan and Puerto Rico.

The opening items of the Proceedings are introductory and exhortative. General papers begin with the presentation of Swinnerton on "Creating Forest Scenic Roads", and several follow on the philosophy of roadways. The banquet speech by the vice-provost of the University of Cincinnati, H. C. Kreuger, on Universities and Student Life, is included. Brush's "Nursery Stock for Highway Landscaping" initiates the technical papers, and is followed by a series of roadside vegetation management presentations, including that of the Institute. Symposium papers on roadside environment constitute another section, and afford reference to technical data (such as the Generalized Comparisons of Plant Material, Class and Species Survival by Geographic Locations).

This volume is a creditable addition to the long series of Proceedings of previous Short Courses, which constitute almost the sole publication specifically devoted to roadside development. With retirement imminent, this is presumably the last Proceedings for which Wilbur J. Garmhausen will have editorial control. Garmy, on one occasion invited speaker to the ASTA turfgrass division meetings, has been the sparkplug behind the Ohio Short Course through the years, and a good friend to the Institute.

CONSERVATION OF NITROGEN BY GRASS

A study by Power and Alessi, March-April, 1971 Agronomy Journal, tells of conservation of fertilizer nitrogen applied to grasslands in North Dakota for six years or more. Extra nitrogen could not be detected as mineral nitrogen in the soil, so apparently it was "tied-up" in grass roots and other organic materials. Yet the effect of this nitrogen was felt many years after application; it was clearly recycled into subsequent crops. No doubt a single fertilization to turf, such as is sometimes practiced on roadside seedings, can have a long-lasting influence, especially under semiarid conditions.

AMERICAN HORTICULTURAL SOCIETY INVITATION

The Institute, through Dr. Schery, has been invited to participate another year on the education committee of the American Horticultural Society.

RHODE ISLAND PLANTSMAN'S SEMINAR

The 1971 "Plantsman's Seminar For Turf Growers and Nurserymen" was held January 20 - 22 at the University of Rhode Island. The final day was devoted specifically to turfgrass, the first two days to general topics such as pollution, and to presentations of special interest to nurserymen. A brief review of Dr. Schery's presentation on "Growth Characteristics of the Various Turfgrasses" is given as a separate item.

Dale Kern, Seed Technology, Marysville, Ohio lead off the presentations with a review of seed quality. Taking the conventional lawn seed label, Mr. Kern pointed out some of the hidden factors that need special test or clarification in order to fully evaluate quality. He pointed out that some of the worst "weeds" come disguised as crop, while many of the conventional weeds that require listing on the label are not a serious problem in mowed turf.

Mr. E. R. Townsend, Rudy-Patrick, Buffalo followed Mr. Kern, and to a degree took issue with Mr. Kern for implying that present "rules and regulations" were negligent of consumer interests. Townsend pointed out that few merchandised articles are so carefully scrutinized, and subject to such careful analysis by both private and government authority, as is lawnseed. While there is always room for improvement (and a proposal is now being advanced to require crop above 1 percent in lawnseed to be named), on the whole the certification procedures and labeling requirements do afford good protection to a customer, and should be reassuring.

Dr. Eliot Roberts' scheduled presentation on turfgrass seed germination was cancelled because of illness. Dr. Skogley, University of Rhode Island, advanced his topic to the morning session, speaking on "Blending Turfgrasses for Better Performance; New Varieties". Skogley emphasized the many new cultivars coming on the scene, and some of the initial results noted at Rhode Island with a number of them. He spoke highly of Fylking, Nugget, Pennstar, Baron and several other bluegrasses; Jamestown and Highlight fine fescue; a few of the bentgrasses. For general usage he favors mixtures of cultivars, thus avoiding some of the risks that come from monocultural planting.

Scholarships and other awards were given outstanding turfgrass students. The afternoon program lead off with the Institute's presentation by Dr. Schery. This was followed by a "teaching" session by extension specialist Dr. Thomas Duff, who dealt with, "Identification of Turfgrasses in the Field and Seeds In The Bag". Most of Dr. Duff's time was devoted to close-up illustrations of turfgrasses, and their identification through use of a key which he had distributed to his audience. Windup was a "question" period, handled chiefly by the Rhode Island staff members.

GRASS GROWTH RETARDATION

Research on growth retardants for roadside usage in reported by Rhode Island researchers in the January, 1971 Proceedings of the Northeastern Weed Science Society. The tests were on Park Kentucky bluegrass and Pennlawn fine fescue. In addition to the conventional maleic hydrazide (MH), three new growth retardants were tried. All of them suppressed growth to a degree, and MH was especially effective in preventing tall seedhead formation. But there was some temporary injury at higher rates, and considerable thinning with one of the experimentals. One might wonder whether the modest and often uncertain results justify the cost of such treatments. Similar, often inconsistent results were obtained in research at Rutgers University, on Merion bluegrass, Pennlawn fine fescue and Manhattan perennial ryegrass, reported in the same Proceedings.

WEED AND DISEASE GUIDES

The Institute was pleased to receive from Virginia Polytechnic Institute, the 1971 Virginia Weed Control Guide, and the January, 1971 Guide for the Chemical Control of Turfgrass Diseases and Turfgrass Weeds. Both are outstanding publications of their kind.

The Weed Control Guide relates to all of agriculture, but has a section on "Lawn and Turf" (which is incorporated in the Turfgrass Disease and Weed publication). With so many herbicides on the scene, an introductory listing of chemical and trade names is especially helpful. Toxicity comparisons, and pesticide residue tolerances constitute the final pages of the publication.

Recommendations for lawn and turf are given under the major headings of type of grass, subdivided for kind of weed. Herbicide control measures for the most part involve familiar herbicides, although it is quite handy to have a listing of precise rates recommended and other "remarks", data difficult to keep in mind. Control of broadleaf weeds is charted, indicating which weeds are susceptible to each of the four herbicides recommended (2,4-D, silvex, dicamba, MCPP). In scanning the list it is apparent that there are fewer cases of resistance to dicamba than to any of the other chemicals.

Turfgrass diseases are given lead coverage in "The Guide For Chemical Control ---". Turf diseases are listed alphabetically, with the grass which they attack cited and the chemical control suggested. In most instances there are a number of alternatives so far as fungicide is concerned. The guide indicates that there is "no known chemical control" for stripe smut, although reports on the usefulness of systemics (such as benlate) have appeared. As mentioned, the weed prevention section of this guide is adapted from that appearing in the general guide. For ready reference the general guide is identified as "Control Series 1, January, 1971", and the turfgrass guide as "Control Series 76, January, 1971".

CRAABGRASS PREVENTER TESTS

Research by Juska and Hanson, USDA, on "Effects of Herbicides on the Germination of Some Turfgrass Species" is reported in the Proceedings of the Northeastern Weed Science Society, volume 25, January 1971. Benefin, bensulide, DCPA, calcium arsenate, lead arsenate, terbutol, and bandane were all checked for their influence on the sprouting of Merion Kentucky bluegrass, fine fescue, Kentucky 31 tall fescue, and Poa annua, at both normal and double recommended rates. Seedlings were made from one week after herbicide application up to 3 months. Of the herbicides, benefin was most toxic to all of the grasses, the arsenates least toxic. Tall fescue proved most resistant to herbicide injury, followed by fine fescue, with the two bluegrasses least resistant. It is not surprising, of course, that with recognized annual grass preventers such as bensulide, DCPA and terbutol, that there would be a fairly lengthy residual effect preventing germination of such species as Poa annua.

NUTSEDGE CONTROL

A study in nutsedge control is reported by Illinois researchers in the November, 1970 Weed Science. Two,4-D treatment of young nutsedge was debilitating at all rates; judged by "tagged" 2,4-D, increased concentrations of the chemical result in lower translocation of later-applied material, perhaps explaining the comparative lack of increased effect of the higher rates.

CRABGRASS CONTROL

"Evaluation of Chemicals For Crabgrass Control in Turfgrass" was reported by Troutman and Jagschitz at the January, 1971 meeting of the Northeastern Weed Society (Proceedings, vol. 25). Products already on the market and new coded selections were tested for both pre-emergence and post-emergence use. Among standard materials, bandane, bensulide, DCPA, siduron and terbutol give excellent pre-emergence control of crabgrass with little or no injury to the turfgrasses (Merion Kentucky bluegrass, Pennlawn fine fescue, Exeter colonial bentgrass). Two of the experimental materials from Europe showed promise. The conventional post-emergence treatment with DSMA or DSMA + siduron gave good crabgrass control without injury to bluegrass or fescue, but temporary damage to bentgrass. Other post-emergence treatments, even though effective in controlling crabgrass, injured the turfgrasses more. One would conclude from these tests at Rhode Island that existing crabgrass control products are reasonably effective and safe, and that it will "take some doing" for a new entrant to unseat them (although the new Fison NC-5651 seems quite promising).

SOD ROOTING

J. H. Madison, California, reports upon bluegrass and colonial bentgrass sod rooting, in the December, 1970 Crop Science. Madison reviews past information on where and how the roots responsible for new rooting of sod grow, and confirms that sod fixation is almost entirely due to new roots, not continued growth or branching of old. All bluegrass shoots produce new roots, and rooting is greatly stimulated by cutting the sod thinly (about $\frac{1}{2}$ inch as compared to 1 or 2 inches). More than three times as many new roots emerge on thin sod as on thick. There is no significant reduction in new foliage, however, with thick sod. Not all colonial bentgrass shoots initiate new roots, but here, too, there is greater stimulation of new roots from thin sod than thick. Although nearly as many new roots are initiated by bluegrass within the first week as within three weeks (with thin sod), colonial bentgrass exhibits delayed rooting and shows a considerable increase in number of roots in the later weeks after transplanting.

POLLUTION FACTS

W. R. Mullison, Dow, reports at length upon "Effects of Herbicides on Water and Its Inhabitants", in the November, 1970 Weed Science. A great many citations are given in this literature survey, that might be useful in counteracting some of the undocumented pesticide hysteria. Mullison concludes that there is little evidence that herbicides are reaching or accumulating in water supplies sufficiently to cause a pollution problem. He finds no "biological magnification" with herbicides, such as is reported for insecticides of the DDT type. He comments, "Our current knowledge of the effects of herbicides on fish, plankton, and other water inhabitants indicate that harmful effects with our present herbicides, when such exists, are only temporary."

SOIL NITROGEN

Research by Hobbs and Thompson, Kansas, reported in the February Agronomy Journal, indicates that with the chernozem soils of Kansas the nitrogen level stabilizes at about 0.1%. Under continuous cropping, if the soil originally contains more than about 0.1% nitrogen, nitrogen is lost, but if it contains less than 0.1% nitrogen is gained.

SNOWMOLD STOPPER

Dewey and Nielson, writing for Crops and Soil magazine, February 1971 report on the control of snowmold by speeding the melting of snow. Black materials spread on the snow absorb the sun's heat, causing melt. Reduction of snowmold could help winter wheat yields, but for practical purposes is confined to elite agricultural and horticultural enterprises (such as the maintenance of fine turf). The authors achieved melt of a foot of snow in four days, in Utah. For larger areas this has been accomplished with crop-dusting airplanes. Lampblack was used successfully on small areas, but was too expensive for large ones; there furnace ash, locally available, was utilized. About a hundred pounds of dust per acre suffices.

BERMUDAGRASS INJURY FROM DACTHAL

Late summer treatments of Tifgreen bermudagrass with Dacthal caused about 15 percent winterkill, although applications before June did not result in significant winter injury. The fact that treated bermudagrass showed significantly increased quantities of nitrogenous materials suggests that the Dacthal treatment stimulated continued vegetative growth, resulting in grass that was less winter-hardy when cold weather came. The observations are reported by Fullerton, Murdoch, Spooner and Frans in the November, 1970 issue of Weed Science.

BROADLEAF WEED CONTROL

Jagschitz, Rhode Island, reports on broadleaf weed control in a presentation to the Northeastern Weed Science Society (Proceedings, Jan., 1971). He checked control of clover, mouse-ear chickweed and dandelion, when growing in Jamestown red fescue, Merion Kentucky bluegrass, and Exeter colonial bentgrass. Excellent results were obtained by the mixing of one or two other herbicides (dicamba, mecoprop, silvex) with 2,4-D, at light rates. All three test weeds were well controlled. There was more injury to the turf from an August application than a May application (especially with combinations containing silvex). These findings are encouraging for the use of very light rates of hazardous herbicides (such as dicamba and silvex) in combination with 2,4-D.

NITROGEN EFFECT ON SEED YIELD IN SUBARCTIC

Research is reported from Alaska in the December, 1970 Crop Science, on the influence nitrogen has on brome grass seed yield. Presumably the response would be noted with other grass species. At any of the rates tried, nitrogen increased the number of spikelets and the seed weight, in the year applied, but did not increase the number of seedheads. The second year there was significant carry-over that increased both the number of seedheads and the seed yields. The author (L. J. Klebesadel) concludes that for northerly environments late summer application of nitrogen should materially improve seed yields the following year, (something not a whole lot different than has been observed for natural bluegrass in the United States).

"I'm always putting off decisions --- Waiting for a Brainy day" (UBS)

CHARCOAL TO COUNTERACT HERBICIDE

Jagschitz, Rhode Island, conducted research on the influence charcoal has on several pre-emergence crabgrass preventers. The research is reported in the January, 1971 Proceedings of the Northeastern Weed Science Society. Bensulide, DCPA and siduron were all reduced in effectiveness used 5 months after an application of charcoal at 100 lbs./A. A year later influence had ceased unless charcoal rates were markedly increased. Bandane, nitralin and calcium arsenate were little affected in either case. The effects of charcoal could be overcome by increasing the rate of herbicide. There seemed to be little evidence of subsequent release of herbicides absorbed on charcoal, although some residual activity was noted from bandane, bensulide and calcium arsenate in the year following treatment.

SEED GERMINATION

Studies by Frank and Larson, North Dakota, on practices influencing the germination of Stipa seed, are reported in the December, 1970 Crop Science. Findings on S. viridula may have applicability with similar grasses showing slow or delayed after-ripening. Fresh seed treated with sodium hypochloride exhibited markedly increased germination, as did germination of seed in an atmosphere provided supplementary oxygen. The authors conclude that the impermeability of hulls (that prevent gas exchange), the mechanical barrier that the hulls impose upon the new sprouts, and perhaps the presence of a seed inhibitor which is readily oxidized, are all instrumental in reducing germination of fresh seed.

BLUEGRASS BREEDING STOCK

Six Kentucky bluegrass germplasm lines have been registered by the Minnesota Agricultural Experiment Station. These are highly apomictic selections selected from a more than thirty thousand lines collected in Minnesota and neighboring states through the years. All exhibited excellent seedling vigor, tolerance of familiar diseases in the field, and resistance to summer heat stress. The six lines are Minnesota 1255, 1920, 5769, 8344, 8911, and 15241. A seed packet from each clone is offered by Foundation Seed Stocks, St. Paul Campus, University of Minnesota, St. Paul, Minnesota 55101, upon written request giving assurance that appropriate recognition of the source will be made part of an open record in the development of new varieties or hybrids for which the lines are used.

ANNUAL GRASS RESPONSE

A California study reported in Ecology, Autumn, 1970, dealt with "Effects of Disturbance on Seed Germination in Some Annual Plants", by T. A. Smith. Although the study was on range land, the principles should apply to annual weed grasses in turf under similar conditions. Germinating grass seedlings were most prevalent on undisturbed ground, only about half as abundant on ground that had been clipped very close (so as to be almost denuded), and only about one fourth as abundant where the ground had been surface-cultivated or burned-over. Legumes (clover) were not so severely affected by the treatment as were annual grasses.

NEW JERSEY CRABGRASS TESTS

Enbel and McVeigh report on pre-emergence herbicide tests at Rutgers University, in the January, 1971 Proceedings of the Northeastern Weed Science Society. Tests were on crabgrass and goosegrass, the former deliberately seeded. Of the commercial materials, Dacthal gave best performance, and there were encouraging results from one formulation of RPl7623 (a Rhodia experimental). There was little or no injury to bluegrass. Fair control of goosegrass was obtained with these same products, but the experimental was severely damaging to the bentgrass-Poa annua turf in which the goosegrass was growing. A Fison (NC-5651) experimental provided reasonable control with no turf injury.

ABOUT POA ANNUA CONTROL

California Turfgrass Culture, vol. 20, no. 4, carried a lead article about the use of pre-emergence chemicals for Poa annua control in southern California. All of the familiar chemicals inhibited Poa annua to a greater or lesser extent, but they varied in their injury to the permanent turf, to overseeding, and in longevity. Dacthal proved damaging both to the permanent turf and to a winterseeding. Among winter-seeded grasses ryegrass was reasonably tolerant, fine fescue and Poa trivialis intermediate, creeping bentgrass intolerant of the pre-emergence chemicals. Bensulide at a fairly high rate gave the most persistent reduction in Poa annua, and was not injurious to the permanent bermudagrass (although it severely damaged newly overseeded grasses). Dichlobenil and EPTC controlled Poa annua immediately, but injured the bermudagrass; these chemicals proved short-lived, and might be useful in renovation where a subsequent overseeding is stressed.

FOXTAIL COMPETITION

H. Fleet, Rutgers University, reporting to the Ecology Society meeting with the AAAS in Chicago, December, 1970, told of research on yellow foxtail, Setaria glauca, a prominent old field weed. A series of experiments established that foxtail greatly inhibits the quantity and size of other plants, but it was not fully confirmed that there are chemical secretions which are inhibitory. Probably root competition and shade from the vigorous foxtail plants were the most important factors limiting other vegetation.

SEED TREATMENT

Although a study by C. D. Ranney, reported in the December, 1970 Crop Science, was conducted on cotton seed, the principle involved may be of interest to grass seed handlers. Systemic fungicides utilized as seed protectants were quite effective, superior to conventional non-systemic methods and to the mercurial treatments now becoming outlawed.

ANNUAL WEED ESTABLISHMENT

Evans and Young, Nevada, report in the November, 1970 Weed Science, that plant litter encourages annual weed germination on rangeland, by moderating temperature and holding moisture. The test grass was downy brome. It is precisely for these same reasons that new lawns are mulched.

RHODE ISLAND PRESENTATION

"Growth Characteristics of Turfgrasses" was the title assigned Dr. Schery, for a presentation to the Plantsman's Seminar for Turf Growers and Nurserymen at the University of Rhode Island, January 20-22. Mr. E. R. Townsend of the Institute Board of Trustees spoke on the same program, concerning "Federal and State Seed Laws; Regulation and Control of Turf Seed Quality".

Dr. Schery pointed out that an increasingly broad field for many types of turfgrass, new cultivars especially, seems shaping up, under conditions far different than formerly. He stated, "recently there has again been some relaxation in the qualifications expected of a turfgrass, better to include specialty cultivars which have been developed for specific purposes, --- This is not to suggest that we will scour the earth in search of new grass species nor that the present fine turfgrasses will become obsolete. There is just too much turf quality inherent in the Kentucky bluegrasses, the fine fescues, the bentgrasses, the perennial ryegrasses, and the five southern genera ---".

Review of the growth habits of each of the major species followed. A brief discussion of the trend towards proprietary grasses rounded out the discussion (i.e. "will extend interest in turfgrasses, and provide the user with superior performance according to his needs and taste. At only moderately increased cost, he receives a rated grass and specific information concerning it --- is better assured of satisfactory performance than if purchasing just 'grass seed'. Somebody will now be standing behind the name.").

Several dozen slides were shown, and three Institute reprints were offered the audience (Kentucky Bluegrass: Turfgrass Par Excellence; Pennncross; and Bluegrass/Bentgrass Checks Poa Annua), supplies of which were placed on the registration table for attendees wishing to take along informational leaflets.

MORE ON CRABGRASS CONTROL

Duich and Waddington, Pennsylvania, reported on "Evaluation of Experimental and Commercial Pre-emergence Crabgrass Chemicals for Turf" at the January, 1971 meeting of the Northeastern Weed Science Society (Proceedings vol. 25). Typical response from standard commercial products was observed. Fine fescue was somewhat more susceptible to injury than Kentucky bluegrass (fine fescue was thinned especially by DCPA and bensulide). A new Fison's product (NC-5651) gave complete control of crabgrass at the 12 lb. rate, without any injury to bluegrass or fescue; it was considered the outstanding experimental material.

TRANSLOCATION IN GRASSES

Studies by Sosebee and Wiebe on Agropyron and Hordeum grasses, reported in the February Agronomy Journal, indicate that moisture shortage decreases translocation from the leaf, but that partial defoliation increases it. Moisture reduction increased the proportion of the radiophosphorus sent downward to the roots, but partial defoliation increased the proportion going to younger leaves. It is reasonable to suppose that turfgrasses would behave similarly.

2,4-D EFFECT ENHANCED

Hurt and Templeton, Maryland, report in the Jan., 1971 Proceeding of the Northeastern Weed Science Society on experiments in which pine resin derivatives (pinolene) used with 2,4-D doubled the phytotoxicity of the 2,4-D but seemed not to lengthen its persistence.

NATURAL INSECT CONTROL

Because of the current reaction to pesticides, especially insecticides, no doubt many lawns will no longer be treated for insect control. It is encouraging that Dr. John Schread, entomologist with the Connecticut Agricultural Experiment Station, writing in the winter issue of the American Horticultural Magazine, reminds us that many natural forces are on the side of insect control. In fact he notes that some of our insect problems are no doubt due to indiscriminate use of insecticides, which killed the predators of pestiferous insect species. Especially interesting in his commendation of birds against which the public has built up antagonism -- starlings, English sparrows and grackles. He reports an instance where starlings reduced a heavy Japanese beetle grub population in turf 95 percent. More than 60 percent of the diet of purple grackles during spring may consist of Japanese beetles. Schread adds, "The sparrow, more often than other birds, dines upon adult Japanese beetles."

SEED GERMINATION

Anwar Khan, Cornell University, discusses "Cytokinins; Permissive Role in Seed Germination", in the March 5, 1971 Science. The discussion is highly technical and involves much interplay of stimuli, as the sub-title "With other plant hormones, cytokinins regulate germination and dormancy by a novel mechanism" would indicate. Hormonal influence on cytokinin apparently triggers "release" of germination. These are basic studies involving the mechanism of inhibition and release; they offer an explanation of mechanisms, rather than suggesting practical means for achieving more rapid germination of lawnseed in the consumer's hands.

PHOSPHORUS UPTAKE

A study by Blair and others at the University of Guelph, Ontario, concerned itself with reason for the greater uptake of phosphorus in the presence of ammonia as compared to nitrate. The study is reported in the March-April, 1971 Agronomy Journal. Chemical changes at the root-soil interface is credited with the phenomenon, including changes in pH. The studies were undertaken on corn, but turfgrass would be expected to respond similarly.

ROUGH WINTER FOR TURF

The open winter, which resulted in much turf desiccation and soil heaving, served as a stringent test for turf varieties on the Institute trial grounds. For the first time in many years perennial ryegrasses suffered severe loss in exposed situations. Seedling grasses of all types late in being started suffered from soil heaving, especially bentgrasses. Established bluegrasses and fine fescues, as customary, came through with flying colors.

FOR GOLF SUPERINTENDENTS

The Institute story, Perspectives on Golf Green Fertilization, appeared in the March Golf Superintendent magazine. The story has been reprinted, and an additional 10,000 copies ordered for distribution by Hercules. Nutrient needs of the golf green are discussed in modern context, in the quest for perpetual juvenility of Penncross and other fine greens grasses. Two tables are included indicating nutrient levels for Merion bluegrass and Pennlawn fescue, as well as bentgrasses and southern turf species.

" " WHAT THEY ARE SAYING " "

"Thank you very much for your lawn articles and pictures for use in the 1971 National Lawn & Garden Week newspaper supplement. We are using most of your material. They are good and to the point, as usual."

Robert J. Falasca, Ex. Vice President
American Seed Trade Association

" -- our paper will once again feature a special supplement on Lawn and Gardening. -- We have used your feature material on grass in the past and found it very interesting. -- Thank you again for your past material and we look forward to receiving new features on grass from you.

Gene Rugh, Garden Editor
(Ft. Wayne) The News-Sentinel

"Thank you again for your interesting and revealing articles as well as your very informative letter. I appreciate all.

William G. Eaton
Winchester, Kentucky

" --- the April 9th issue of Seed World will feature 'Lawn Grass Seed' -- If you have any information along any of the lines --- or anything pertaining to lawns or lawngrass seed --- which you would like to contribute to this issue I'll be happy to have it."

P. M. Stelle, Editor
Seed World

"Dear Bob, Thank you for your letter of February 5th, and the two reprints you enclosed. It was a real pleasure to have you back in R.I. at long last. I hope time between visits is not so long again. We all enjoyed your fine presentation at our seminar and certainly thank you for your contribution. Very best wishes."

Dr. C. R. Skogley, Dept. of Plant & Soil Sci.
University of Rhode Island

"Thank you for your contribution to the 1970 Recreation and Park Yearbook. We greatly appreciate your interest in this project and your consideration --- and we hope that you will keep us in mind in the future when you publish or develop materials for public distribution

Diana R. Dunn, Ph.D.
National Recreation & Park Association

"On behalf of Under Secretary J. Phil Campbell, I would like to invite you to the opening of the Department's third 'Growing With America' Festival. --- I would appreciate your telephoning DU 8-4335 to let us know if you can attend."

Harold R. Lewis, Director of Information
U.S. Department of Agriculture

"Re: Fine Fescues -- Will you be kind enough to send us two copies of the reprint from Weeds Trees and Turf magazine ---"

Francis J. Mayer
Steven J. R. Frohlich & Co.

"How can we ever thank you enough for giving that excellent talk, that everyone delighted in!"

Anne Bruce Haldeman
Glenview, Kentucky

" " WHAT THEY ARE SAYING " " Continued

"Your article on Integrating Grasses into the Landscape, February issue of Building Operating Management, was well written and served to bring into focus an area of architecture sometimes overlooked or ignored."

Wendell M. Jordan, Technical Director
Campbell Green Cunzolo (Architects & Engineers)

"I read your recent paper in the Golf Superintendent with a great deal of interest. I plan to begin a turf nutrition study here at the University of New Hampshire this fall."

William E. Knoop, Extension Turf Specialist
University of New Hampshire

"Many thanks for your contribution and helping us make our share of this supplement a success."

Robert J. Falasca, Exec. V. Pres.
American Seed Trade Association

"If you speak on lawns on radio again this year I would very much appreciate it if your secretary could let me know when you will be on."

Ruth Seitz
Bement, Illinois

"THE LAWN BOOK, -- should not be allowed to go out of print --- my concern is to keep the book available for its readership and more --- As you can judge from this brief statement, your book is close to both my heart and my pocketbook."

Gerald J. Gross, Sr. Vice President
The Macmillan Company

"Lawn & Turf Group Elects. Gordon Newton, Northrup, King & Co., Minneapolis, was elected president of the Better Lawn & Turf Institute recently at a meeting held in conjunction with that of the Oregon Seed League. George Osburn, Hercules Incorporated, Wilmington, Del., will serve as vice-president, and Robert Russell, J. & L. Adikes, Inc., Jamaica, New York, is secretary-treasurer."

Seed Trade News

"In your recent press kit, I found two articles I would like to reprint in the Turf Bulletin."

Fred Cheney, Editor
University of Massachusetts.

"Please send a copy of your leaflet listing and discussing bluegrass varieties and any other leaflets available."

William H. Gady, A.I.A.
Kral, Zepf, Freitag & Associates

"I would like to say that I am pleased and the information that I have received has been most helpful to me."

Thomas E. Ewert
University of Delaware