

BETTER LAWN — HARVESTS

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BETTER LAWN & TURF INSTITUTE

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RESUME OF ANNUAL MEETING

President Osburn called the Annual Meeting of the Better Lawn & Turf Institute to order at 3:30 p.m., July 2, at the St. Paul Hilton Hotel. Mr. Russell's minutes for 1973, and his Treasurer's report were approved. Executive Director Schery's report on the year's activity is included elsewhere in this issue of Harvests, in full for the record.

Committee reports were received from Peter Loft (Support), Doyle Jacklin (Variety Review Board), and Jack Valentine through Edward Mangelsdorf (Liaison), all indicating continuing activity. Mr. Jacklin noted that five new varieties were accepted by the Variety Review Board during the year, Cheri, Emerald, Glade, Koket, and Majestic.

It was reported that the Fertilizer Institute has appropriated five thousand dollars for promotion of lawn and garden activities and might be ready for some cooperative endeavors. Mr. Osburn appointed a committee headed by Mr. Skaptason to study standards useful for granting the Seal of Approval for products other than seed (a "Product Review Board"), with immediate interest in herbicides and fertilizers.

E. R. Townsend, Chairman of the Nominating Committee was unable to be present, but presented his report through the Secretary. Nominations and elections are reported separately.

President Osburn summarized the year as being "very successful", complimenting particularly the Variety Review Board, and the improved financing measures. He felt this augured well for even greater progress in the future. He was most pleased to have PBI-Gordon become a sponsor of the Institute. He looks for additional new sponsors, and enhanced chance to encourage gardening nationwide.

With no further business, the Annual Meeting was adjourned and the Board of Trustees convened.

Minutes were approved and unanimously new officers elected (reported elsewhere). A new Executive Committee was also designated. Varieties accepted by the VRB were formally confirmed.

Richard Bailey was named by the chair to head a committee to study whether revision of the "rules" governing standards for the Seal of Approval is in order. Advent of the new "turf-type" perennial ryegrasses may warrant some modification concerning percentage standards having to do with bunchgrasses.

Mr. Russell discussed briefly the scheme for "invoicing" sponsoring support. The possibility of some changes becoming necessary at the Marysville office, should Seed Technology relocate, was mentioned. The Executive Committee's study of proposed modifications to the Federal Seed Act was "seconded", and Dr. Schery instructed to convey its gist to Mr. Clyde Edwards of USDA.

Expenditures by the Marysville office for the past fiscal year were reviewed, and a general budget along these lines approved for 1974-75 (with special note to undertake all travel felt necessary). Plans for the Institute to remain as one of the sponsoring organizations for the spring "Supplement" were approved, similar to action of the 1973-74 activity (with expectation of the Lawn & Turfgrass Division of ASTA jointly sharing in the costs). A proposal to donate \$1,000 to the Oregon Seed Trade Association in support of research and educational efforts concerning field burning was approved unanimously.

Date for the next Annual Meeting was set for Dallas, Texas, in late June of 1975, again in conjunction with the ASTA (the most convenient time for Trustees to gather). President Osburn thanked all for their enthusiasm before adjourning.

Detailed minutes were recorded on tape by Secretary Russell, and will constitute the complete record of these sessions. Those in attendance were Messrs: Dick Bailey, Merion Bluegrass Assoc.; Richard Bell, Stanford Seed Co.; Arnie Bonnicksen, Western Farmers; Henry Brusca, Pine Run Farm Supply; J. L. Carnes, International Seeds; Mike Harshbarger, Purdue Alumni Assoc.; Stephen C. Hart, Chas. C. Hart Seed Co.; W. R. Herron, Stanford Seed Co.; Alan Hick, Northrup, King; Doyle Jacklin, Jacklin Seed Co.; Peter Loft, Loft Seed Co.; Edw. F. Mangelsdorf, Ed. F. Mangelsdorf & Bro.; Cliff Mattila, Western Farmers; Everett Mealman, PBI-Gordon; Gordon J. Miller, Stanford Seed Co.; Strick Newsom, Vaughan-Jacklin; George Osburn, Hercules Chemical; Jerry Pepin, International Seeds; Alvin J. Powell, Stanford Seed Co.; Robert Russell, J. & L. Adikes; Robert W. Schery, Marysville, Ohio; J. S. Skaptason, PBI-Gordon; and Frieda L. Wertman, Central Seed Lab.

ANNUAL MEETING -- ELECTIONS & APPOINTMENTS

Trustees nominated and elected at the Annual Meeting held in St. Paul July 2, were as follows:

Dick Bailey	President, Merion Bluegrass Association
J. L. Carnes	International Seeds
Michael Harshbarger	Purdue Ag. Alumni Association
Alan Hick	Northrup, King & Company
Peter Loft	Loft's Pedigreed Seed Company
Edward Mangelsdorf	Ed. F. Mangelsdorf & Bro.
Gordon Miller	Stanford Seed Company (Philadelphia)
Howard Mader	Grower, Salem, Oregon
Leroy Nicewood	Highland Bentgrass Commission (or such succeeding chairman as may be designated by the Commission)
Bill Rose	Turf-Seed, Inc.
J. S. Skaptason	PBI-Gordon Corporation
E. R. Townsend	Whitney-Dickinson Seeds, Inc.
Kent Wiley	Pickseed West
George Valentine	Seaboard Seed Company

Immediately following the Annual Meeting, President Osburn called the new trustees into session, for election of new officers, and appointment of committees. The Board of Trustees elected the following:

President	George Osburn
Vice President	Doyle Jacklin
Secretary-Treasurer	Robert Russell

President Osburn obtained concurrence of the Trustees in appointing an Executive Committee consisting of the officers plus Messrs. Carnes, Hick and Skaptason.

Mr. Osburn re-appointed Robert Russell as commercial representative on the Variety Review Board. Technical personnel completes the last year of a three-year term, with Dr. Gerald Pepin assuming chairmanship, Howard Kaerwer and Doyle Jacklin members.

What with interest accelerating in the "Seal of Approval" for other than seed mixtures, the Board of Trustees approved tentative creation of a Product Review Board to parallel activities of the VRB in the non-seed realm. President Osburn named Mr. Skaptason as Chairman of a committee charged with developing a plan for a Product Review Board and suggested standards, at the earliest opportunity. President Osburn asked that George Valentine, Peter Loft and Robert Schery serve on this committee (and additionally others whom Mr. Skaptason would feel helpful to his assignment).

MAGAZINE STORIES THIS QUARTER

Stories that have been reprinted, published or prepared for press during the quarter include the following:

Agri-fieldman	Item offering literature
American Cemetery	The Trend to Tailored Turfs
Careers, Inc. (Guidance)	Editorial service on "Landscape Maintenance Supt."
Elks magazine	A Lawn's Not All That Bother
Flower & Garden	Starting a New Lawn/Improving an Old Lawn
Garden Writers Bulletin	Lawn Care, Month by Month
Horticulture	The Lawn, Ecology in the Dooryard
Outdoor Power Equipment	What Are You Going to Advise for the Lawn?
Parks & Recreation	Maxi and Mini Turfs
Seed World	("Lawngress issue") Various pick up from press kit
Seedsman's Digest	New Varieties for Fine Turf

PBI-GORDON ACCEPTS MEMBERSHIP

The PBI-Gordon Corporation, formulators of tailored lawn pesticides (Trimec and Acme line), have joined the Institute on a supporting basis equivalent to Hercules Chemical. Mr. Skip Skaptason has been named to serve on the Institute Board of Trustees. PBI-Gordon adds needed breadth to the Institute and its program, opening added avenues for publicity on Institute objectives. We welcome PBI-Gordon most heartily into the "fine turf" fraternity.

BETTER LATE THAN NEVER

The June "News and Views" (Am. Hort. Soc.) carried Dr. Schery's comments on "Why Grass Seed Costs Are Up," an attempt to counter mis-information published last October. Increased prices are due not only to shortages of perennial ryegrass as had been cited as cause for the general price rise, but field burning restrictions, low-yield of better cultivars, and competition from commodity crops, have all been influential.

DIRECTOR'S ANNUAL REPORT

FISCAL YEAR 1973-74

For most Trustees Institute activities are an old story, proved successful through years of practice and fine-tuned by experience. Moreover, a running record appears in the quarterly issues of Harvests, so we needn't take a great deal of time for details. Still, an Annual Meeting is time for a bird's eye resume, not only to pinpoint accomplishments, but to have the benefit of Trustee judgment as to what are the more meaningful ways to apply funds which never seem quite to keep up with rising costs.

Our program for 1973-74 endeavored, as in the past, to publicize grasses and lawn care products in the context of honest, credible advice about lawns, useful even to the inexperienced. The Institute's niche has always been one of working through established channels -- primarily newspapers, magazines, garden writers, editors, columnists, educators, etc. -- since direct advertising or sponsorship of costly endeavors would be much beyond our financial capability. The Institute's "reach" continues to be most efficiently extended by seasonal press kits, stories in magazines, books and other reference materials, and by taking advantage of what personal appearances prove possible for the Director. Efforts are amplified by member firms aiding in dissemination of Institute materials, such as the distribution of reprints as mailing stuffers and as handouts.

Perhaps noteworthy this year has been the Institute's assumption of responsibility for the lawn materials in the "clip-sheet" Supplement (jointly sponsored by The American Association of Nurserymen, The Fertilizer Institute, National Agricultural Chemicals Association, and National Swimming Pool Institute). We have been backed in this by cost-sharing from the Lawn & Turfgrass Division of ASTA. We have also undertaken a fairly massive campaign of furnishing literature to people sending in a self-addressed, stamped envelop (the offer made on television, in magazines, and through the press kit). The Variety Review Board has accepted several new proprietary cultivars, and quite recently we have begun preparing stories for specialized publications and house organs. Several reference volumes, in which we had a hand appeared during the year, including THE LAWN HANDBOOK by the Brooklyn Botanic Garden, The American Garden Guild's 10,000 GARDEN QUESTIONS ANSWERED (Dr. Schery was responsible for the lawn section); and House & Garden's annual "Garden Guide." PBI-Gordon, with its tailored herbicides of high quality, is joining the Institute, and fits nicely the responsible image sought for the Institute. I will review these and other activities of the year briefly, "for the record."

PRESS KITS: An autumn press kit was mailed in July containing 14 pages (20 items) with back-up reprints of magazine stories that included NEW LAWN GRASSES APPLAUDED (The American Rose), THE NEW LOOK IN LAWN GRASSES (Better Homes & Gardens), PERSPECTIVES ON LAWN MAKING AND KEEPING (Mass. Turf Bulletin). In February production and mailing of the spring press kit was completed, that included 17 pages (38 items) with these reprints of magazine stories to lend authority: LAWN GRASSES FOR SPECIAL PLACES AND PURPOSES (Horticulture), NEW LAWNGRASSES CAN AID IN TURF MAINTENANCE (Park Maintenance), NOW IS THE TIME TO GET YOUR LAWN INTO SHAPE (The Family Handyman), HIGH FEVER OVER COOL LAWNS (The Gardener). A few examples of the way press kit stories translate into newspaper space are photocopied as the following page.

Working through William C. Pflaum, who edited this year's clip sheet Supplement for the several sponsoring associations mentioned above, the Institute prepared the text and illustrations about lawns. This proved to be highly successful, and widely used by many of the several thousands of newspapers to which it was distributed.

Arboretum Kenilworth
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not

Long-Lasting
Popular for Lawn

Ureaform (nitroform) fer- less, fine law
have become quite bred for best
ing and sum- only when pr
What is ble care. A topfligh
periodical

Box Label Tells Buye
Contents Of Grass See

WITH BENTGRASSES

Homeowner May Have Lawn Like Golf Green

... are Colonial bent-
... three-fourths to one in
OTHER THAN fr

manage are Colonial bent-grasses. Highland is a colonial variety that gets along with modest care and is readily available as seed of high quality.

A CREEPING bentgrass such as Emerald is even more elegant for closely mowed lawns. Emerald can be cared for with little difficulty.

were bred, ryegrass was mainly used as a nurse in midcontinent

Tailor-

Among fine lawngresses
has nowhere been
than with

change has
more momentous
the Kentucky bluegrass
Common grass has pr
from the sce
named

well faded in
favor of sleek nam
ties such as Bonnieb
Nugget, Pennstar
import.

New Hy
In Lawn

A number of the bluegrasses are, for example, Bonnie

varieties have been Rutgers University
from Europe, too spring from two
campus for exam parents, Bellevue
is a domestic cr instar.

“turf-type” per
and 1

Lawns

d which the new bluegrass
differ from old-fashion
most remarkably.

They are low and remain leafy below and remain height. B and clipping height. B and food-making

ety is so much
leaf is retained,
wing, deeper
vigor

Important Job

A soil conditioner may also not be necessary such as garden urea. Only in

... necessary, ...
... anure or compost. ...
... ve a good crum- ...
... soil can you f ...
... it's. and ...
... di- ...

RETARDANTS
OWING

chemical sprays to retard
owners hope will
entirely

the spray might not affect
wing would still be

... practical to upgrade the
varieties since most new law
low profile — or d

Rhizome - underground stem, especially prominent in *Kel*

Begrass In Shade g it th
number of the new blue-
es are good in wthe shade,
of some have always

es. and conse
ed should mean
-fewer weeds, stronger
eration. NEW variety
resista

Time

writes that this is the season to reflect upon lawns, to plan for the future, to consider using new lawngrasses which can aid in turf projects.

insects and disease than other ones commonly used, and more tolerant of unfavorable climatic and soil conditions.

fine-textured and are an attractive dark green and Fylking and Pennstar blue grasses, Highlight and

Ureaform — A po
urea and formaldeh
releases

and higher priced than the

We find that this Supplement complements very nicely the Institute's own press kit, in that it goes out in ready-to-use newspaper column form suited for pick up by photographic techniques by smaller newspapers having no garden editor or talent for lawn and garden coverage. In contrast, the Institute's own press kits are directed to garden writers and editorial specialists who often prefer to utilize the stories for composing their own columns and formats (in sending our press kits to these talented people, we imply that sound facts are all they will need, not organizational help in presenting intelligible information to their readers). We feel gratified that so many of the major newspapers do utilize the Institute press kits with full credit, fitted only to space exigencies. As you will note from the exhibits circulated, quite frequently the press kit accounts for much of the in-season weekly gardening page space that many urban newspapers offer. In one instance, at least, our stories were translated into French by garden writer Paul Pouliot, for the Montreal La Presse.

Monitoring press kit pick up through a clipping service has become prohibitive and impractical. But we feel confident that space amounting to tens of thousands of column inches continues to be achieved by each press kit mailing. A few sample pages that have come to our attention are on display. We know that when a story is picked up by a national wire service (as seems to occur annually through the good offices of our friend Earl Aronson of Associated Press), that its use is assured by numerous newspapers all over the country.

MAGAZINE STORIES: During the fiscal year 45 titles have appeared as published or reprinted stories from magazines. These are itemized alphabetically in the following table. It adds up to widespread and diversified coverage, especially considering the amplification obtained through added distribution of reprints through numerous channels (mailings, members, public offerings, at personal appearances). During the year 55,000 reprints of the various stories were ordered for such purposes, materially extending the stories' usefulness. Especially gratifying was an order for 2,000 each of 10 reprints by Hercules Chemical, for distribution through its channels. Syndicated garden columnists (such as "Doc" Abraham), and the Syracuse Men's Garden Club (with a "lawn booth" at the New York State Fair), utilize and usually offer Institute reprints. Reprints are distributed generously to educational institutions and libraries, where they often serve in classrooms for vocational teaching. We have had a number of requests for Institute literature from foreign countries so distant as Chile and South Africa, and more frequently from Europe. A generous package of literature was supplied the Japanese contingent attending the Second International Turfgrass Conference. Reprints are mailed to professional turfgrass agronomists as part of the American Society of Agronomy reprint exchange program as well.

Titles Prepared or Appearing During the Fiscal Year

Agri-fieldman	New Varieties for Fine Turf (Referred in Letters to the Editor)
American Cemetery	Trends to Tailored Turfs
American Garden Guild	10,000 Gardens Questions Answered (Lawn Section)
Am. Hort. Society-News & Views	Explanation of rising seed costs
ASA publications	The Institute of Ecology
Avant Gardener	Grass Plotting
Better Crops w/Plant Food	Great Lawngrass Revival
Better Homes & Gardens	A New Look in Lawn Grasses (Reprinting)
Changing Times	Improved Grasses for the Lawn (Reprinting)
Club Management	Lawngrass Fallout: A Boon to Clubs
Com. & Suburban Press Soc.	Various stories for newsletter
Crops & Soils	New Challenges, Opportunities face Lawnseed Industry
Elks	A Lawn's not all that Bother
Family Handyman	Now is the Time to get your Lawn into Shape

Flower & Garden	You Can Patch a Lawn Profitably in Spring
Flower & Garden	Starting a New Lawn/Improving an Old Lawn
Garden Writers Bulletin	Lawn Care, Month by Month
The Gardener	The Future of your Lawn -- Tailored Turf Care
The Gardener	High Fever Over Cool Lawns
Golfdom	Emerald, New Progress on the Bentgrass Front
House & Garden	Garden Guide: The Lawngrass Explosion
Horticulture	Lawngrasses for Special Places & Purposes
Horticulture	Rally 'Round the Ryegrasses
Horticulture	The Lawn, -- Ecology in the Dooryard
Internat. Turfgrass Proceeding	Quality Seed on the American Market
Mass. Turf Bulletin	Perspectives on Lawn Making & Keeping
Outdoor Power Equipment	What Are You Going to Advise for the Lawn?
Park Maintenance	Tailored Turf Maintenance
Park Maintenance	How New Varieties Fit Lawn Maintenance
(Also in Proceedings)	
Parks & Recreation	Maxi and Mini Turfs
Plants & Gardens	A New Lawn, Step by Step
(Brooklyn Bot.)	Buying Lawn Seed
Resort Management	Spring Lawn Preparation
Resort Management	Lawns at the Ready
Seed Trade News	Cultivation of a Good Lawn Aids, Does not Harm
Seed Trade News	Clip Bluegrass Early
Seed World	Various lawn stories (Lawngrass issue); Nature's Turf
	Triumphs; Perennial Ryegrasses Make Their Mark
Seedsman's Digest	New Varieties for Fine Turf

OTHER PUBLICATIONS: Mention has already been made of general reference volumes to which the Institute contributed (Brooklyn Botanic Garden, American Garden Guild, H&G Garden Guide, etc.). We also carry out assignments for others where this supports Institute objectives. Parker Sweeper continues to promote the leaflet authored for the company last year, LAWN GROOMING MADE EASY, and Dr. Schery has aided with a number of other releases, including TURF CONTAMINANTS (Weeds Trees & Turf). The Institute is a friendly critic of certain horticultural associations, goading American Horticultural Society particularly for so continually favoring ornamentals over turfgrass. Stories have been prepared for the American Horticultural Society's "News and Views," and for the Garden Writers' Association newsletter now edited by Derek Fell (LAWN CARE, MONTH BY MONTH is scheduled for imminent publication in this vehicle). Books authored by Dr. Schery, cited in last year's report, continue to have their influence; A PERFECT LAWN is being used as text in some popular college and adult education courses. The publisher has been "pestered" in the hope that an inexpensive paperback issue of this book can soon be had. The book has fared exceptionally well in book reviews, and should be made available to a wider audience than only those willing to pay \$8.95 for a hard cover edition.

MISCELLANEOUS ACTIVITIES: As opportunities permit, Director Schery makes several personal appearances each year. During the year he presented a paper at the Second International Turfgrass Conference (QUALITY OF LAWNSEED OFFERINGS ON THE AMERICAN MARKET); spoke before the Park Maintenance Institute in Memphis; appeared twice on the Garden Center Symposium in Madison, Wisconsin; spoke before the Ohio Seed Dealers Association; was on the Iowa Golf Course Superintendents program; and gave several talks to service organizations, clubs, garden clubs, church groups and suchlike.

Of exceptional interest were three appearances on "The Morning Exchange" TV hour in Cleveland, with the highest audience rating of all networks in the area for that time of day. The switchboards were so jammed within seconds, that on each

occasion the station felt obliged to schedule another appearance of the "lawn man." On the most recent occasion, mention of availability of a reprint for a self-addressed, stamped envelope (on a Friday) brought several hundred pieces of mail to Marysville by the following Monday. Dr. Schery also appeared as a featured speaker on The Garden Center of Greater Cleveland evening program. Because of a death in the family, Dr. Schery was unable to be present at the Ohio Turfgrass Foundation annual meeting in Cincinnati, where, through him, the Institute was honored with a citation (the plaque reads: "In Recognition of Professional Excellence"). The Institute Director continues to serve on various committees of the Ohio Turfgrass Foundation, and will be a speaker at the 1974 conference in December.

The Institute cooperates in various lawn-related activities, such as participating on the committee organized by Doris Watson hoping for reactivation of some form of "The Lawn and Garden Week" in cooperation with the USDA. The Institute was one of the organizations queried about suggested amendments to the Federal Seed Act, upon which action is scheduled today. The Extension Service in several states continues to receive special mailings for urban county agents, distributed from the state college. Dr. Schery served as liaison representative for the Crop Science Society with The Institute of Ecology, and has prepared reviews for both. He is senior author for preparation of the chapter on lawn maintenance for the forthcoming Turfgrass Slide Monograph being compiled by the American Society of Agronomy. Exchange of information via correspondence with various writers, publishers, and lawn enthusiasts throughout the country continues. From time to time we are asked to recommend films or supply visuals, for which a list of films and an ample photo library are maintained. When possible turfgrass research centers are visited, notably this year universities and public institutions along the east coast from Boston to Blacksburg, Virginia, which were scheduled in Phase I of the tour for the Second International Turfgrass Conference. Of course our own demonstration plantings are continuously observed and maintained.

The daily office routine continues as in the past, major activities consisting of compilation and publication of Harvests (71 pages in four quarterly issues during the fiscal year); keeping of the necessary business records for office, seal of approval, and similar functions; keeping "on top" of correspondence and telephone inquiries (this year somewhat amplified by self-addressed, stamped envelope offers; particularly noteworthy were those in the Agri-fieldman, the press kit, and over "The Morning Exchange" television broadcast); We are gratified with continuing cooperation from the Edison Garden News (Consolidated Edison of the Chicago area), whose editor G. C. Jecmen writes, "Please keep the releases coming and I'll . . . utilize them to the fullest . . . as these meaningful articles are published in future editions, you will be in receipt of tear sheets. Thanking you and with every good wish." In this vein, of course, the Institute has now become widely enough recognized that we do receive numerous inquiries and correspondence which are routinely handled.

IN APPRECIATION: The Marysville staff very much appreciates the consideration shown it by the Board of Trustees, and particularly the helpfulness of its officers and committee chairmen. The burden has been especially heavy on Secretary-Treasurer Russell, who has capably initiated the new "invoicing" system for proprietaries, as well as overseeing tax and payroll matters. Doyle Jacklin deserves recognition for his excellent service as chairman of the Variety Review Board, and in spite of a busy schedule of his own President Osburn has been unstinting in his enthusiasm for the Institute. We sincerely appreciate the time, effort and support all officers, trustees and members have lent The Better Lawn and Turf Institute for the fiscal year 1973-74.

"THE TREND TO TAILORED TURF"

American Cemetery magazine will publish an Institute story of this title. The story points up that in these days of shortages and increased costs, seed of good quality is still a bargain. The breeding and recognition given turf-type ryegrasses adds a new dimension to fine turf possibilities.

ELKS MAGAZINE STORY READIED

A LAWN'S NOT ALL THAT BOTHER was prepared for Elks magazine in an attempt to inform members of this large fraternal organization through its journal. The story points out that lawn tending is really not complicated, and that a lawn of improved varieties can be a source of pride.

KEEP PAGE PREPARED FOR FLOWER AND GARDEN

An up-dated version of the much used lawn planting KEEP SHEET has been prepared for Flower and Garden magazine. The presentation is in two parts, "Starting a New Lawn" and "Improving an Old Lawn."

RYEGRASS STORY PICK UP

An Institute story titled RYEGRASS EARN'S PEDIGREE (as it appeared in the Suffolk County Agricultural News N.Y.) was reprinted in the Nassau County Agricultural News for June. This is an excellent example of the way Institute releases are made use of without attribution and only slight modification to fit space requirements and local needs.

STORY APPEARS

The Institute story, WHAT ARE YOU GOING TO ADVISE FOR THE LAWN?, appeared in the March Outdoor Power Equipment magazine. This was a brisk, short treatment, with a listing of Variety Review Board cultivars according to species at the end of the article. The story states, "The heart of the lawn, of course, is the grass. Don't stint on good seed of top varieties (even with the luxury stuff you get thousands of seeds for a penny)."

PARKS & RECREATION ARTICLE

MAXI AND MINI TURFS prepared for Parks and Recreation magazine, deals with the importance of sowing seed of good quality, whether for small lawns or for acreage. Products tailored for turf care lend quite an assist. A thumbnail sketch is provided of VRB bluegrasses, fescues, bentgrasses and perennial ryegrasses.

LAWN GRASS ISSUE

April Seed World appeared as the annual "lawnglass issue." We are flattered, that after an editorial introduction, much of the text about lawnglasses was derived from the Institute press kit and companion stories contributed by Institute member firms. Numerous lawnglass advertisements further highlighted the issue.

The introduction quoted liberally from Institute releases and The Lawn Book, the magazine acknowledging: "In a recent press kit released by Dr. Schery on PLANT LAWN SEED CAREFULLY, which, if you sell lawn seed, you may wish to post on your bulletin board. . . (The item from the press kit on higher lawn seed costs is quoted)."

SEED TRADE NEWS PICK UP

RYEGRASS ISN'T WHAT IT USED TO BE, is the title given a Seed Trade News pick up from Institute releases, extolling the improved varieties of perennial ryegrass. Dr. Schery and the Lawn Institute receive credit. The story concludes that the turf-type ryegrasses are "not only better looking than former strains, they have greater hardiness and better disease resistance. Mowing quality and density in the cultivars have improved, too."

ECOLOGICAL STORY PREPARED

THE LAWN . . . ECOLOGY IN THE DOORYARD is a story prepared for Horticulture magazine that emphasizes relationships of the lawn to the environment. Newer turf-grass varieties are mentioned as "making lawn keeping a lot easier." Modern herbicide combinations like Trimec . . .", and "slow-release fertilizers of the Nitroform type . . ." are credited for their contribution.

REPORTED IN AGRI-FIELDMAN

The May, 1974 issue of Agri-fieldman carried the following in the "Speak Up!" column:

" . . . I wonder if it might not be appropriate for Agri-fieldman to carry a summary of "What's New in Lawngrass Cultivars" . . . a fieldman might counsel these days a mixture of three or four grasses . . . from among two or three species, to offset some of the disadvantages of monoculture. But fieldmen may not have time to become acquainted with the new varieties (these are too numerous now even for a turf professional to keep in mind), and a summarizing chart might be helpful. . ."

The editors add: "We have asked Dr. Schery for a summarizing chart. Fieldman may receive same by writing Dr. Schery at the above address. Send a self-addressed stamped envelope with your request."

INSTITUTE OFFER APPEARS

Sunday, May 12, Columbus Dispatch carried on the garden pages a composite story built from the Institute's spring press kit, having to do with sowing of lawnseed and lawn planting. Included was an offer of literature if a self-addressed stamped envelope was sent to the Institute Marysville office. The pertinent paragraphs read:

"This may be occasion for introducing up-to-date cultivars. The new varieties are attractively low-growing, tolerant of disease.

"If you would like a listing of new bluegrass, fine fescue, bentgrass, and perennial ryegrass varieties, send a self-addressed, stamped envelope to the Lawn Institute . . ."

TV APPEARANCE

Dr. Schery appeared April 2, on the television program, "The Morning Exchange", WEWS studios, Cleveland. Again the switchboards were jammed with questions, only a few of which could be answered on the air in spite of this appearance having been extended to 45 minutes (from the previous 30). This attests to high interest in gardening in the Cleveland area. Dr. William Baker, Executive Producer, requested another appearance for early May.

In the April 2 program, Dr. Schery showed slides that included several of the new lawn cultivars, as well as reviewing attentions customarily accorded a lawn in spring. The remainder of the program (aside from commercials and news flashes) involved the answering of questions listeners are invited to telephone in to the studio. Dr. Baker indicates that The Morning Exchange is the most listened-to morning program, outdrawing in the Cleveland area such national offerings as "Today."

INQUIRY FROM ABROAD

The Institute is unexpectedly recognized abroad, to judge by correspondence received from many parts of the world. Most recent was an inquiry from the University of Chile, Santiago, by C. Muller, head of ornamental plant production. He was interested in receiving informational literature that could be used for teaching purposes, pointing out that a new program in Ornamental Plant Production is being organized and an attempt made to coordinate information world-wide. An assortment of reprints was sent to Mr. Muller, and books cited which might be of interest.

EUROPEAN EXTOLS; AMERICAN TURFGRASS RESEARCH

Edgar W. Schweizer, agronomist, Switzerland, who represented his firm at the Second International Turfgrass Conference in the United States last summer, has kindly forwarded reprints of a review he presented (written in German, translated into French) published in the leading Swiss horticultural magazine, Der Gartenbau. Schweizer exhibits excellent understanding of American turfgrass practices, and the reasons behind them. He is highly impressed by the use and appreciation of turf in the United States, and particularly by the elaborate research undertaken here (Michigan State University is especially cited).

A BOOST FOR IMPROVED GRASSES

The May issue of Weeds Trees & Turf carried an item by John R. Hall, turf specialist from Maryland, which comments on economies needed in a turf industry now confronted with shortages. Hall comments, "... common Kentucky bluegrass [is] almost into the same cost bracket as the superior varieties. But with the cost differential diminished between superior bluegrass and common bluegrass this should be the year to strengthen blends with real performers such as Merion, Pennstar, Fylking, and Adelphi."

REPRINTS MAILED

As part of the "Literature Exchange" with professional agronomists throughout the country, Institute reprints were mailed out on April 17. Included were: GREAT LAWN GRASS REVIVAL; NEW CHALLENGES, OPPORTUNITIES FACE THE LAWNSEED INDUSTRY; THE NEW LOOK IN LAWN GRASSES; SPRING LAWN PREPARATION; NEW LAWN GRASSES APPLAUDED; NEW LAWN GRASSES CAN AID IN TURF MAINTENANCE; UP-GRADE YOUR LAWN; LAWN GRASSES FOR SPECIAL PLACES AND PURPOSES; THE FUTURE OF YOUR LAWN -- TAILORED TURF CARE; HIGH FEVER OVER COOL LAWNS; YOU CAN PATCH A LAWN PROFITABLY IN SPRING; LAWN GRASS FALLOUT: A BOON TO CLUBS; NOW IS THE TIME TO GET YOUR LAWN INTO SHAPE; NEW VARIETIES BRING CHANGE TO SEEDED LAWNS; and IMPROVED GRASSES FOR THE LAWN.

This literature exchange developed through the American Society of Agronomy has replaced, for the Institute, the old "advisor mailing" made periodically (although we are always happy to distribute the reprints if they prove of interest to technical people, such as extension specialists).

TURF PROCEEDINGS BEING READIED

Word from Dr. Eliot Roberts, editor for the International Turfgrass Society's Second Research Conference Proceedings, indicates that the papers are ready for publication, although behind schedule. The Institute presentation, "Quality of Lawnseed on the American Market", given by Dr. Schery, commends the improvement of lawnseed as exemplified by a recent survey. The abstract that will accompany this report in the Proceedings reads as follows:

"Lawnseed offerings in the United States were examined not only for traditional quality factors, but for other inclusions that might have critical influence on the lawn. Crop seed is often cause for concern, and merits more precise identification in sophisticated lawnseed evaluation. Formulation for specific use and climate is in some cases still inadequate. Considering seven quality criteria, some three-fourths of lawnseed rated 'excellent' to 'good' (contrasted with probably one-third so at mid-century). Noxious weeds were infrequent; non-noxious weeds were mainly of types not troublesome or otherwise easily controllable. Germination and purity were seldom out of tolerance. Avoiding 'cheap' seed mixtures affords some protection against poor formulation, and low crop seed content helps escape the more serious 'weed' problems."

OHIO TURFGRASS FOUNDATION MEETS

Morning committee meetings, followed by an afternoon board meeting, were held by the Ohio Turfgrass Foundation on April 30. Dr. Schery represented the Institute as a member of the "Legislative-Environmental Committee."

The Legislative Committee "cooled off" the proposal of one member seeking legislation against tall fescue in lawnseed mixtures. Harold Porter and Charles Abbott, Ohio seed enforcement officials, indicated that present legislation advanced to the Ohio legislature will prove adequate, remaining flexible enough so that if any action is warranted this could be accomplished through regulation rather than law. Moreover, with the northeastern control officials apparently anxious to accept new lawnseed labeling, it looks as though offensive "crop" species may be categorized in the future; this would identify tall fescue as a "weed" of sorts in otherwise fine-textured lawnseed mixtures.

The committee decided not to pursue this matter further. But at the December annual meeting it is proposed that this committee provide discussion of: 1) trends in legislation, 2) Osha and Fifra "status-of-the-minute," and 3) a general review of weed control intended to calm the fears of those unduly alarmed on environmental grounds (after all, there are good seed mixtures and good pesticides the use of which is beneficial rather than harmful).

The seed legislation pending in Ohio is said to be little different than formerly. Most notable, perhaps, is that the maximum "inert" will be 15 percent for all (total) components (rather than each separately). The committee intends to keep membership abreast of legislative action through items published from time to time in the foundation's newsletter.

LISTING SCHEDULED

Through the American Garden Guild Book Club, the Institute will receive this listing in their "201 Valuable Free Things for People Who Love Gardening" pamphlet.

"The Lawn Institute, Marysville, Ohio 43040. Free leaflets about lawns. The Institute has a variety of leaflets concerning lawn care. If you inquire about a specific problem, they will send you the proper leaflet to help you with the answer. Be sure to send a self-addressed stamped envelope."

This extends our program in use for the last few press kits, in which similar offer has been made in a newspaper item. A constant trickle of inquiries results, not burdensome since generally all that is involved is the stuffing of a reprint into the stamped envelope, at no cost other than staff time.

TV SERIES CONTINUES

On Friday, May 10, Dr. Schery appeared on behalf of the Institute in the third of a series of "lawn answer" programs on the WEWS "Morning Exchange", Cleveland, Ohio. As has been noted in previous Harvests, this is a popular early morning hour in the Cleveland area, said to outdraw all competing programs. After a brief introductory presentation showing a few visuals, telephone calls are accepted answering homeowner questions. Interestingly, three of the calls were "long distance" from Akron, Ohio, with a lawn climate similar to Cleveland but a fair distance from the lake. On this occasion a reprint offering was made to listeners sending in a self-addressed, stamped envelope to the Marysville Office. It made "believers" of us, with over 200 requests in the first three mail deliveries following Dr. Schery's appearance, in spite of only one spot announcement of a momentary nature. Apparently there is a real hunger for good lawn information, with a responsive audience among TV viewers.

MCCALL'S PLANS LAWN COVERAGE

In early April Dr. Schery received a letter from a McCall's editor asking, "We are researching a possible article on grass and lawns and wonder if you might have . . . information . . ." A whole gamut of lawn tending questions was then asked. These were answered as best possible by letter, and abundant literature forwarded (along with an offer to review or further help shape any story). Such a presentation offers excellent opportunity to call attention to the many fine new turf cultivars.

AN ASSIST FROM EARL ARONSON

The Lawn Institute is treated kindly again by our long-time friend Earl Aronson (Associated Press). Aronson gives full credit to the Institute in his "Hints for Lawn" column distributed nationally during May.

The column opens with the admonition to renovate sensibly, adding, "Robert W. Schery, our friend at the Lawn Institute in Marysville, Ohio, said a well-prepared soilbed requires as little as two pounds of quality seed . . ." Seeding instructions follow. The column winds up, "Select good quality lawnseed with perennial fine-textured grasses predominating . . . If you send a self-addressed, stamped envelope to the Lawn Institute, you can get a listing of new bluegrass, fine fescue, and perennial ryegrass varieties."

LAWN PHOTOS FOR NEW GARDENING BOOK

Mrs. Betty Powell, Executive Editor of The Avant Gardener, is preparing a gardening book with an extensive chapter on lawns. Mrs. Powell came to the Institute for illustrations and information on the "new elite grasses," which will receive credit in the book. This promises to be a well-written book by experienced people (Horticultural Data Processors, New York). It should help publicize new turfgrass cultivars.

ASSIST GIVEN CAREER GUIDE

The Institute has aided Careers, Inc., publisher of "Guidance" publications in the preparation of item No. 407 "Landscape Maintenance Superintendent." The Institute is credited in the acknowledgment booklet. Editor Misner writes, "We appreciate very much the assistance you gave us in the revision of our brief 'Landscape Maintenance Superintendent'."

QUARTERLY INVOICES MAILED

In mid-June, Secretary-Treasurer Russell mailed out "invoices" itemizing final payments due from sponsoring proprietaries for the fiscal year ending, and calling for advanced minimums in the fiscal year beginning. A dues reminder to non-voting members was also sent out with annual meeting announcement. It will be appreciated if members who have not remitted will remind themselves that these contributions are to be sent to the Marysville office at this time of year.

LARGE REPRINT DISTRIBUTION

We are pleased that one of our major sponsors will soon be distributing 2,000 copies each of ten reprints, a total of 10,000 going to sales personnel and customers. Such voluminous placement of Institute literature exactly "where the action is" cannot help but advance the Institute's cause.

NEW YORK STATE FAIR

As in the past, the Institute is cooperating with the Men's Garden Club of Syracuse, which mans a "lawn booth" at the New York State Fair. Corresponding secretary Swart has written Dr. Schery of his current interest, -- trace minerals for turf, -- and has been sent Institute literature. As in past years, Institute reprints will be used either as handouts or as the basis for an informational sheet distributed at the New York State Fair.

TECHNICAL SECTIONOHIO CONFERENCE PROCEEDINGS

The Proceedings of the Ohio Turfgrass Conference of December, 1972 was received only this May. Not all of the presentations are of interest to seedsmen, but a review of the Proceedings may be of interest.

Opening papers dealt with construction of football fields, handling of pesticide containers, and customer relationships. Then Dr. Niehaus reviewed "Blends and Mixtures of Turfgrasses," as he observed them at Wooster, Ohio.

Niehaus discussed the usual advantages and disadvantages of mixtures. He concluded that no mixture was better than its best component. Few mixtures remain stable, but seldom is any component completely eliminated. At Wooster, bluegrass gained and fine fescue receded. Not more than 20 percent perennial ryegrass should be used in combination with bluegrass, lest ryegrass completely dominate the stand. At Wooster, Merion tends to dominate bluegrass blends, especially at high fertility levels. When stripe smut invades, the balance may tip away from Merion. In the ratings given, Fylking and Pennstar planted alone had top scores but were followed high on the list by Merion in combination with these same varieties. Rating poorest after four years (though highest after two) were Merion and Merion-Kenblue. Windsor-Kenblue and Kenblue alone rated low on both occasions.

Dr. Turgeon, Michigan, reviewed weed control in sod production. The tribulations of athletic fields maintenance were reviewed, and the unsatisfactory results from contracting landscaping by Bowling Green personnel.

Dr. Funk, Rutgers, reviewed at length "Bluegrass, Fescue, and Ryegrass for Turf." Much of the presentation was devoted to the adaptation of these grasses and the care they require. Sodco and Glade were mentioned as exhibiting good mildew resistance, along with Warren selections and a couple of common types. Nugget, Merion, Fylking, and Pennstar were cited as having good leafspot resistance, but Galaxy, Adelphi, Sydsport, and Baron were not far behind. Showing good stripe smut tolerance were Glade, Pennstar, Fylking, Bonnieblue, Sodco, plus a few common or unreleased types. Merion and Nugget were said to be highly susceptible to stem rust, but Nugget rated along with Glade near the top in resistance to leaf rust. Nugget and Glade were highest-rating for low, slow growth, although most of the modern varieties are well adapted to reasonably low mowing. Bonnieblue and Galaxy were cited for excellent winter color and early spring growth, while Baron and Nugget were said to be "late."

Funk speaks highly of Jamestown Chewings fescue, with creeping and spreading fescues cited but not extolled. Perennial ryegrasses are broken down into "hay-type," "pasture-type," and "turf-type." Among commercial releases, only Manhattan, Pennfine, and NK-200 were listed in the last-named category; Barenza, Caprice, Compas, Lamora, Pelo, and a couple of coded selections are "pasture-type."

Presentations followed on "Weed Control in Established Turf," with a table citing treatments for about two dozen familiar weeds. Water quality, with the parameters by which it is judged, was next reviewed, with some interesting data illustrating how protective a good grass sod is for the soil and for holding nutrients. For example, almost no nitrogen was lost (through tile drains) under bluegrass sod, even when fertilized. By contrast 20 times as much nitrogen was lost under corn and 10 times as much under alfalfa. The amount of nitrogen in runoff from a woodland was only about 1/20th of the nitrogen found in rainwater. There is much useful data in the presentation concerning water pollution.

Control of water weeds is next reviewed, with specific treatments cited according to kinds of weeds. Daniel talks about specialized soils for athletic fields, and

OHIO CONFERENCE PROCEEDINGS (Continued)

about readying soil for seeding and sodding. Miller advocates soil tests, and appropriate corrective action, for fertilizing and liming turf. Other papers deal with human relationships, the environment, and "Effects of Pollutants on Plant Growth." English, Ohio State, recommends medium levels of fertilization for adequate rapidity in the formation of sod, and suitable strength (high fertility levels were as deleterious as low ones, resulting in poor root and rhizome development).

John Shoulders, Virginia, reviewed the maintenance program for the football field at Virginia Tech., which includes bolster seeding with Manhattan ryegrass-bluegrass through the playing season in the hopes that some revegetation will take place. Shoulders also analyzed cost of sod production, and concludes this to be nearly 30 cents per yard exclusive of any special problems (such as rock removal) and not including capitalization of equipment (costs figured on rental value of what is needed).

TURFGRASS RESEARCH IN THE PACIFIC NORTHWEST

Members may be interested in a summary of turfgrass research in southwestern Canada and the northwestern United States, as reported in the Proceedings of the 27th Northwest Turfgrass Conference, held at Harrison Hot Springs, British Columbia, late in 1973. Only a few of the highlights can be mentioned here.

Dr. Goss, at Puyallup, Washington, finds sulphur quite important as a nutrient; the effectiveness of other nutrients was enhanced when sulphur was included. Goss considers 12 pounds of nitrogen/M as necessary for good quality, slightly less potassium, and about 3 pounds of sulphur (and phosphorus). Winter injury was less where sulphur had been applied, and summer color better. Slow-release nitrogen sources were effective, as were bensulide and tricalcium arsenate in controlling Poa annua (but the exact rates of arsenate vary with soil).

Dr. Gould reviewed research on turfgrass diseases. A preliminary screening of disease-tolerant bentgrasses provided 19 cultivars, among which were Kingstown and Emerald. Systemic fungicides alone did not control Fusarium patch, and it is recommended that these be alternated with contact fungicides such as thiram or maneb. Apparently some fungi have developed resistance to the benzimidazoles.

Ophiobolus, which attacks bentgrasses in western Washington, may be controllable with eastern Washington soil (it has repressed this disease in wheat fields). The bentgrass varieties selected in western Washington are being tested in eastern Washington as well. Three tables indicating performance of various fungicides are included with Gould's report; for the most part differences were not great, to judge by the "percentage of healthy grass" on June 10 (fungicide applications made through the previous winter and spring).

Dr. Law, Pullman, Washington, confirms the effectiveness of growth regulators in restricting height of bluegrass, but notes differential response of varieties and ineffectiveness from the treatments made both earlier and later than May 18.

Dr. Taylor, Agassiz, B.C., reported on his variety trials. Among Chewings fescues, Koket, Wintergreen, Highlight, and Jamestown were the leading cultivars, in that order. Dawson ranked third (after two coded selections) among creeping red fescues, ahead of Pennlawn. Nugget was the leading Kentucky bluegrass, with Pennstar fifth (after three coded selections), followed closely by Fylking, Sodco, Baron, Cheri, Merion, and Sydsport. Kingstown was the leading velvet bentgrass, Manhattan the leading perennial ryegrass.

TURFGRASS RESEARCH (Continued)

Seed mixtures tended towards one dominating variety in time, usually Highland bentgrass in this climate even when Highland was used in a very small proportion. Pennlawn and Merion were more competitive, and tended to hold their balance when seeded in combination. Perennial ryegrass tends to dominate ryegrass-bluegrass combinations, unless the ryegrass content was restricted to less than half the bluegrass by seed weight. Manhattan had superior density among ryegrasses, Sydsport the best speed of establishment and density of cover among bluegrasses.

Dr. Ensign reported on test results at Moscow, Idaho. Adelphi, Arboretum, and Cougar bluegrasses exhibited very fine texture under his test conditions, as did Pennfine perennial ryegrass. All fine fescues had excellent texture. P-29, Pennstar, and a few other selections (not yet released) gave earliest spring regrowth among the bluegrasses, with Baron, Fylking, and Manhattan later, Nugget very late. Darkest in color were Adelphi, Baron, P-29, and Nugget, followed by others. These findings do not necessarily match observations in other parts of the country. Evaluations are partly with seed production in mind. A table listing test results for 33 varieties is included.

WEIBULL'S "GRAS-TIPS" APPEARS

The December 1973 issue of Weibull's excellent research review, Gras-Tips, was received from Landskrona, Sweden, in May. Various research reports by technical personnel are given, attractively illustrated, fortunately (for Americans) with summaries and duplicate captions in English. Many of the cultivars dealt with are the same that are marketed in the United States.

An opening article reviewed ecological considerations in roadside seeding. It was followed with a comprehensive alphabetical list of plants according to Swedish common names, with the botanical identity given.

More of interest to those concerned with managed turf, is a review of a seeding mixture planted to northern Norway, consisting of 45 percent Reptans fine fescue, 35 percent Primo Kentucky bluegrass, 10 percent Highland bentgrass and 10 percent dwarf timothy. After three years bluegrass and fine fescue dominated the planting, with very little invasion by local weeds or adventives. Neither the timothy nor the bentgrass made much of a contribution to the permanent cover, and bluegrass was slightly more evident than was the red fescue. Conditions are more stringent this far north than in middle and southern Scandinavia.

Other reports deal with mildew resistance of bluegrass, and Fusarium susceptibility of fine fescue. Bluegrass testing was in the greenhouse, with an inoculant of Erysiphe picked up in the fields. On November 1 none of the varieties was severely attacked, and all were similar (Park and Windsor were the two most heavily infected of the America cultivars; several selections released in America the least infected, including Birka, Prato, Delta, Nugget, Primo, etc.). But by mid-December infection was widespread and serious on almost all cultivars (only Delta and Nugget showing significant resistance at this time; Merion was the most heavily attacked). Fescues, too, were inoculated under controlled conditions (spontaneous infection was so small as to be scarcely significant). Using the variety Reptans as the standard, only Dawson, Golfrood, and Oasis were less severely infected, and not a lot less so. Only Golfrood and Oasis recovered from attack better than did Reptans, while Rolax, Illahee and Wintergreen made almost no recovery. Under field conditions several varieties, including Boreal, Novarubra, Pennlawn performed well compared to the standard (Reptans). When field plots were artificially infected only Novarubra and one breeding line showed less Fusarium spots per plot, although

WEIBULL'S "GRAS-TIPS" (Continued)

at the end of the experiment Boreal, Novarubra, Rasengold, and Illahee had showed as little dead turf as did Reptans (Oasis and Dawson were about half wiped out; Erika, Polar, and Golfrood about one-fourth lost).

Another report deals with nematode attack on grasses in Sweden. Creeping bentgrass is reviewed as a very useful ground cover where heavy wear is not anticipated. Emerald and Penncross are mentioned as the only two high quality cultivars on the market.

Wear resistance of turf is discussed at some length, under various types of use (sports fields, golf greens, etc.). Under Scandinavian conditions Kentucky bluegrass is said to wear best, although dwarf timothy is used for some athletic fields (perennial ryegrass and tall fescue wear well but are too "open"). Perennial ryegrass is felt not to be winter hardy enough, while the red fescues and bentgrasses tolerate wear less well. Proper fertilization, irrigation and topdressing are stressed. Shade is to be avoided where good wear is desired. Do not play upon frozen grass, and mow as tall as possible (consistent with use) for improved wear and drought tolerance.

GREEN SECTION REPORT

The March issue of the United States Golf Association Green Section Record contained several mentions that can perhaps be extrapolated to lawns.

Duble, Texas, discussing golf green construction specifications, points out how effective are the "slow-release" forms of nitrogen recommended for this highly porous synthetic greens soils. Even on pure sand leaching loss was only 5.9 percent in 50 days with ureaform, 7.5 percent with IBDU.

Regional agronomists looked back upon 1973, and deemed it an unusually troublesome year. In the East it was mainly continuous and heavy rains, with drainage problems. In California it was a "people problem," -- too much use of golf courses in that heavily populated region. Insects seem to be increasingly troublesome, especially in the Southeast, and systemic fungicides have proven erratic when used alone, many "new" turf diseases showing up. The use of calcium arsenate for Poa annua control is judged risky, and certainly is not recommended for greens.

White-Stevens, Rutgers, attacks "fads that are fallacies", including organic foods, fertilizer "poisoning," inordinate fear of environmental toxification, reaction against pesticides, and so on. The author states, "These fads and fallacies . . . are becoming translated into laws, many of which are so scientifically unsound that they, in fact, are impossible either to obey or to administer." One point often overlooked is "that all chemicals are both poisonous and innocuous depending upon dose, exposure route, frequency, and species, and that there is a biological threshold value for every chemical on every species."

In answer to the question, "What is the best all-around Kentucky bluegrass . . ." the magazine suggests a blend of new varieties. "This blending of varieties sets up a dynamic equilibrium that should result in good turf year-around."

NOISE AFFECTS SEED GERMINATION

Crops & Soils magazine, April-May, summarizes research conducted at the University of North Carolina, in which it was shown that germination of turnip seeds, at least, is influenced by sound. Noise did not influence dry seed, but once seed was dampened, 100 decibels of sound hastened germination (although total germination in the end, was little different from the controls). There was no speculation whether speedier germination carried through to advanced plants and higher yields.

SIDURON KEEPS BERMUDA OUT OF BLUEGRASS

Research by Youngner, et al, in the "Winter, 1974" California Turfgrass Culture confirms precisely the usefulness of siduron (Tupersan) in controlling bermudagrass that invades cool-season species (Kentucky bluegrass and bentgrass were the test species). Siduron is definitely more lethal to bermudagrass than to cool-season grasses (it seems hardly to bother bluegrass), and few if any bermudagrass seeds escape a twelve pounds per acre treatment. This and heavier rates even keep bermudagrass cuttings from rooting well, and heavier rates are helpful in keeping bermuda from invading the collar of a bentgrass golf green. Laboratory studies indicate siduron is translocated in the bermudagrass; is toxic at both high and low temperatures (more so at the higher temperature); restricts shoot growth more than root growth; and is less toxic at low than high light intensity.

BLUEGRASS GROWTH STATISTICS

The seasonal growth of Kentucky bluegrass is reported upon in a study by Bernard, New York, published in the early spring issue of Ecology. Peaks of bluegrass growth are well recognized, but the actual measurements reported in this study (while comparing bluegrass with sedge) may be good to have on file. Above-ground bluegrass green leaf peaked for spring in late May-early June, reaching 114 g/M². During summer "slump" green tissue fell to just 87 g/M² (July-August); September saw revival back to a 149 g/M² peak, with daily growth gains on the order of 3.3 g/M². Under-ground, bluegrass was most abundant in winter (1667 g/M²), declining to a low in summer (1194 g/M²), and reviving in October (1458 g/M²). It is interesting how much greater is the dry weight of bluegrass parts growing below ground as compared to tissue above ground.

BLUEGRASS-RYEGRASS ATHLETIC FIELDS

Dr. Roy L. Goss, Washington, has a suggestion for planting playing fields consisting of a bluegrass-ryegrass combination (which he recommends). Because ryegrass is quick and competitive to newly planted bluegrass, he suggests sowing bluegrass first (50-80 lb./A), and after the seedlings have appeared sow the ryegrass (75-100 lb./A). Goss says that this enables the bluegrass to compete more successfully. If the ryegrass is planted at the same time as the bluegrass, not more than 35 pounds of seed per acre should be used. Goss suggests "improved Kentucky bluegrasses such as Merion, Fylking, Baron, Pennstar . . . plus suitable varieties of the fine-leaved turf-type ryegrasses." The comments are made in the Proceedings of the 27th Northwest Turfgrass Conference, held at Harrison Hot Springs, British Columbia.

DOES POLLUTION AFFECT PEST GRASS ABUNDANCE?

A report by W. D. Cocking, Virginia, to the Ecology Society Annual meeting in mid June, indicated that application of sulphur dioxide (often a significant component of the atmosphere in industrialized areas), affected species composition in an old field. The sulphur dioxide caused general stress, but recovery growth was rapid. Foxtail and crabgrass accounted for about one fourth of the herbage in untreated areas, but often were more than twice this abundant after sulphur dioxide stress. Are annual grasses such as these encouraged in lawns of urbanized areas by an atmosphere contaminated with sulphur dioxide?

VEGETATION ACCUMULATION

A report by G. E. Lang, Dartmouth College, to the Ecological Society annual meeting in June, indicates that (in New Jersey) leaf litter increases to nearly a half kilo per square meter, and then holds steady, whether the plant community is grass, shrubs, or forest. This suggests that thatch in a lawn accumulates to a level somewhat on this order before production and decay come into approximate balance.

CONSTANT SEED SOWING ADVOCATED

Madison et al, writing for the U.S.G.A. Green Section record, May issue, advocate "A New Management Program for Greens" that encompasses continuous application of bentgrass seed. In contrast to the usual intermittent topdressing of greens, these California researchers suggest a very light topdressing (primarily sand) each three or four weeks, with suitable fertilizer and pesticides included, and an half ounce of bentgrass seed to each 1,000 square feet. As the "problems" are gradually buried, the bentgrass seed is present as an alternative to new encursion of Poa annua or other weeds. Sounds like an attractive, continuing market for bentgrass!

WINTER TURFGRASS DISEASE IN WESTERN CANADA

Dr. J. D. Smith, Saskatchewan, reported on winter grass diseases to the 27th Northwest Turfgrass Conference, held in British Columbia. This was a joint Canadian-United States conference, and much of the research reported applies jointly to the northwestern United States and western Canada.

"Snow mold" disease is quite complicated, involving many fungus organisms, some not completely identified nor even yet named. Many apparently operate in "complexes" rather than alone, and embrace a number of genera. One interesting finding that Smith reports is the special influence of an "unnamed fungus -- probably a Gliocladium or Tubercularia," important not as a disease causer but as an antagonist to snow mold pathogens.

Some of the fungus strains or species to which snow mold is attributed in the contiguous states are not of great consequence in Canada-Alaska. On the other hand many other fungi, including LTB (low-temperature Basidiomycetes) are very troublesome. Bentgrass varieties considered reasonably disease-resistant farther south apparently succumb farther north, -- viz. "Penncross bent seemed more susceptible than Seaside or colonial," and "many of the greens on the new courses are sown with Penncross bent -- an excellent putting surface in milder climates but quite susceptible to Sclerotinia borealis."

Some of the fungicides which have proven successful in halting the various snow mold afflictions are cited in the Proceedings (pages 96-103).

TOXICITY OF LAWN HERBICIDES TO TREES

Neely and Crowley, Morton Arboretum (near Chicago), Illinois, in three locations investigated the "Toxicity of Soil-applied Herbicides to Shade Trees." The results are reported in the April HortScience. When herbicides were used at the rate recommended by the manufacturer, or even at three times this, they were relatively safe to use around trees. The exception was dicamba, which consistently caused phytotoxic symptoms.

Seeming to be relatively harmless were the usual pre-emergence crabgrass preventers, phenoxy materials like 2,4-D, and arsonate. The seriousness of dicamba injury varied with the rate, type of soil and the rainfall. Spruces were readily killed by dicamba; tulip tree, honeylocust, pinoak and linden trees suffered mild die back; walnut, ash, maple, and redbud suffered leaf distortion; red cedar was unaffected.

The Institute had been instrumental in obtaining test product for this research some years ago.

NUTSEDGE CONTROL

A news note in Turfgrass Times, spring issue, cites Rhode Island research announcing an effective control for hard-to-kill nutsedge (Cyperus). The chemical recommended is bentazon (Basagran), without particulars as to how and when used.

MORE ON STRIPE SMUT

Dr. Clinton Hodges, Iowa, elaborated upon the increasing problem of stripe smut with turfgrasses, in the April Golf Superintendent. Hodges emphasizes that the disease is often confused with flag smut, and is becoming increasingly important not only on the widely used Merion bluegrass, but on several bentgrasses as well. He feels that it is particularly a problem on well-kept turf, that death of infected tillers on less well fertilized, unirrigated grass restricts spread of the disease. Only a small percentage of new plants from seed become infected by the ubiquitous teliospores, but once a plant is infected the disease becomes perennial and systemic, extending to all new tillers. Dr. Hodges cites varieties of bluegrass that are reasonably resistant to stripe smut, but notes that many of the famous old creeping bentgrasses are susceptible. Systemic fungicides are mentioned as a possible control. A thorough bibliography of 30 titles accompanies the publication.

BIOLOGICAL CONTROL OF DISEASE IN TURF

Drs. Endo and Colbaugh, California, in an article in the June Golf Superintendent elaborate upon the thesis that Endo has endorsed previously, suggesting that considerable competition and antagonism by turf microorganisms occurs, whereby troublesome ones are kept in check. He theorizes that "stress conditions" may so incapacitate certain organisms that they no longer repress disease-producing facultative ones. Thus drought, drying clippings, sets back bacteria which normally release a repressive gas that prevents Helminthosporium from sporulation (also, the drying releases certain foods useful to Helminthosporium). The reasoning may be a little strained, since one can also imagine stresses (such as drying) causing considerable damage to pest organisms!

Nevertheless, this concept is of considerable interest in an "ecological age." And, empirically at least, some research backs up the general idea. For example, Endo and Colbaugh state, ". . . more disease was produced on plants grown in sterile soil than on plants grown in untreated field soil. One experimenter was able to greatly decrease root infection . . . by adding a minute quantity of non-sterile soil to sterile soil. C. J. Gould noted that the 'take all' fungus develops best on bentgrass greens following soil fumigation. . ."

EFFECT OF HERBICIDES ON SOD

An interesting "special" by Jagschits and Skogley, Rhode Island, appears in the June Weeds Trees & Turf. These well known researchers investigated the influence of various weed control treatments on bluegrass sod, both in situ and transplanted. Some of the crabgrass preventers made the grass coarser and of poor quality (benefin and DCPA). Sod strength was reduced by benefin and bensulide (the effect with bensulide lasted five months). Benefin reduced both tiller and rhizome production, and root growth of young sod (even four months after transplanting) was inhibited by benefin, bensulide and DCPA. Only bensulide inhibited root growth of mature sod measured three months after treatment. 2,4-D, alone and in combination, was detrimental to rooting if used within four weeks either before or after transplanting sod. Obviously, caution is in order when using even the most familiar herbicides, lest there be hidden detrimental influences (especially on juvenile sod, such as is the basis for the sod industry).

PLANTS CONSERVE FERTILIZER NITROGEN

Some ammonia loss occurs from a fertilizer application, especially to alkaline soil. A study on ammonia volatilization by Massachusetts researchers, reported in the May-June Agronomy Journal, indicates that as much as 60 percent of the loss is prevented if plants (corn) are growing rather than if the soil is bare. Apparently ammonia nitrogen is quickly absorbed by plant roots. One would anticipate very little loss from nitrogenous fertilizer applied to a flourishing lawn.

LEAFSPOT ON BLUEGRASS IN IOWA

Hodges and Blain discuss increasing concern about Helminthosporium sorokinianum disease on bluegrass, in the May issue of the Plant Disease Report. Possible reasons for this summer leafspot becoming more serious than in the past may be due to present-day intensive growing of lawns (watering and fertilization favor the disease), perhaps to more virulent strains of the disease (or to increasing susceptibility of bluegrass). In the research reported the authors rated 25 familiar bluegrass cultivars for the severity of infection. Least infected were Fylking, Glade and Pennstar; most seriously infected were South Dakota common, Park, Sydsport, Nugget, and Victa. Surprisingly, common types such as Kenblue were only mildly infected, along with Baron, Majestic, Bonnieblue and several others.

GRASS REACTION TO DROUGHT STRESS

Corleto and Laude, California, report in the March-April Crop Science on the reaction of annual and perennial ryegrass to various intervals of drought. Influence from drought was felt as long as four weeks after its cessation. Annual ryegrass regrowth was significantly stimulated by moderate drought.

SOD PRODUCTION IN THE PACIFIC NORTHWEST

A nice capsule summary, by Roy Goss, Washington, on the title subject, appears in the June issue of Weeds Trees and Turf. Goss mentions that the principle sod varieties are Merion, Fylking, Baron, and (increasingly) Nugget bluegrasses, often mixed with a bit of fine fescue or turf-type perennial ryegrasses.

BERMUDAGRASS BREEDING

Powell, Burton, and Young, U.S.D.A. Beltsville and Tifton, report in the March-April Crop Science that gamma-ray induction of mutations in turf-type bermudas seems quite practical, having produced 71 distinct clones in their research. This may afford a way to bypass the genetic barrier of sterility caused by triploidy in the prominent bermudagrass hybrids which must be vegetatively propagated.

GRASS ANATOMY REPORTED

Stiff and Powell, Beltsville, report in the March-April Crop Science on "Stem Anatomy of Turfgrass" (research commented upon previously in earlier publication). The authors group familiar grasses into three rather overlapping types on the basis of distribution of vascular bundles in the stem. Of practical interest, the degree of sclerification (durable cell wall formation) in several tissues seems related to thatch formation.

LAWNS CONTRIBUTE TO HUMAN COMFORT

Dr. J. H. Madison, California, reports in the "Winter 1974" California Turfgrass Culture, on experiments conducted with a mixed Kentucky bluegrass-Manhattan ryegrass turf influencing ambient temperature. When the turf was mowed tall (4 inches), its temperature was 11° below air reading (67° F. versus 78° F.). When mowed at 1-1/2 inches, air and turf temperature were about the same, and at 1/2 inch the turf was actually a bit hotter than the air. Soil or gravel was even hotter (92° F.), but the hottest cover of all was plastic grass, which reached a temperature of 125° F. (46° F. hotter than the air). Turf temperatures were measured with an infra-red sensing device.

GALAXY RECOGNIZED

Under the title "New Bluegrass Hybrids Developed at Rutgers University", the June Goff Superintendent magazine acknowledged Galaxy bluegrass, giving some of its main features and regions of adaptation.