BETTER LAWN - - HARVESTS

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PRESS KIT, "SUPPLEMENT", OUT ON SCHEDULE

The Institute's own press kit (17 pages, 25 stories, 3 supporting reprints) was in the mails by mid-February, and the "joint supplement", Lawns, Gardens and Pools (done cooperatively with American Association of Nurserymen, The Fertilizer Institute, and National Swimming Pool Institute; through Pflaum Associates) not much later. Members have been kept up-to-date by being sent copies of each. Rather than throw them away after examination, why not pass them along to your local paper with the recommendation that here is something useful.

EXPANDED PRESS MAILINGS LAUNCHED

Final approval was given by the executive committee to expanded press mailings by the Institute into the southern states. The first in an expected series was mailed in late March. It featured the stories "Lawns Are Efficient" and "About 'Slow-Release' Lawn Fertilizers"; the seeding of lawns was emphasized through the inclusion of two reprints ("Rally 'Round The Ryegrasses", and "What Is The Grass"). A covering letter mentioned timeliness of gradual-release fertilization for the South, and the usefulness and beauty of the new ryegrasses. It served as a resume to tie the package together.

"AWARD OF MERIT" ANNOUNCED

Late last year President Jacklin presented to Dr. Reed Funk, the Institute's "Award of Merit" at the New Jersey Expo. In March an announcement of this, along with a photograph (borrowed from Rutgers) was mailed to twenty-one trade magazines. The announcement read:

LAWN INSTITUTE HONORS DR. FUNK

> Dr. Reed Funk of Rutgers University, originator of many of America's modern lawngrass cultivars, received a plaque of appreciation and a hearty commendation from Mr. Doyle Jacklin, elected President of the Lawn Institute. The award was made at the recent New Jersey Turfgrass Expo.
>
> Mr. Jacklin noted, "A primary factor in the Lawn Institute's successful program of public education and encouragement of lawn efficiency has been availability of today's superior turfgrass varieties. Many have been originated by you and your students under the outstanding breeding program at Rutgers. This token is in deep appreciation of your leadership and excellence of research".

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"AWARD OF MERIT" ANNOUNCED - Continued

This is only the second Award of Merit ever given by the Lawn Institute, the first having gone to George Osburn of Hercules Chemical, recently deceased. Mr. Osburn, a past president of the Lawn Institute, was prominent in fostering the "gradual-release" concept of turf fertilization.

Lawn Institute staff headquarters is in Marysville, Ohio under the direction of Dr. Robert W. Schery. Officers of the Institute, in addition to Mr. Jacklin (an executive with Vaughan-Jacklin, Inc.), are Messrs. Gordon Miller, Stanford Seed, Vice President; and Robert Russell, J. & L. Adikes, Secretary-Treasurer.

EXECUTIVE COMMITTEE MEETS FEBRUARY 10 IN CHICAGO

A full morning was devoted to executive committee discussions at the Drake Hotel in Chicago, attended by President Jacklin, Secretary-Treasurer Russell, Vice President Miller, Board Members Carnes and Hick, and Institute Director Schery (Ross Allmon, Board Member, was prevented from attending by a last minute complication in his schedule, but telephoned "comments" to Dr. Schery the day before the meeting).

Plans for the future were reviewed, which, in addition to the usual routine, involve amplification of efforts particularly in the Southeast. Dr. Schery suggested some additional help, particularly as it might relate to expanded efforts in the Southeast, and President Jacklin asked Vice President Miller to check into the possibility that Dr. Schery had suggested. Limited income makes any dramatic enlargement of Institute effort difficult at the moment.

Mr. Russell felt that seasonal income shortfall might result more from lag in cash flow than in actual deficiency. He reviewed with the committee the new computerized proprietary assessment billing, which looks more complicated than it actually is. The chief changes to be instituted are: A declining rate of assessment for quantity over 1 million pounds, and no assessment for quantity over 4 million pounds.

Plans for a possible promotional program in the Southeast were discussed, involving compilation of an entirely new mailing list. In the beginning, at least, rather than the bulky (and expensive) folder, a limited selection of stories and reprints sent first class might better fulfill objectives. Main interests would center upon winterseeding and gradual-release fertilization, with the use of improved cultivars for winterseeding in the southern grass region. Supplementing any mailings from the Institute would be development of a story or stories for the professional press.

President Jacklin reviewed his successful presentation of the Institute's "Award of Merit" to Dr. Reed Funk, at the New Jersey Expo. His remarks would be epitomized into a news release, and sent out to trade press with an accompanying photograph (the negative of which is furnished by Rutgers University).

Mr. Jacklin revealed that he had asked Bob Peterson, Burlingham, to chair a committee on reviewing research grants, with Messrs. Glately and Hurley as committee members. Mr. Peterson had also agreed to represent the Institute at the charter meeting of the proposed federations of turfgrass associations being held in

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conjunction with the Golf Course Superintendents conference in San Antonio. Tentative other committee assignments were discussed, but finalization awaited chance for Mr. Jacklin to talk with the proposed appointees.

Director Schery was asked to review progress on the joint Lawn and Garden "Supplement" (other participants being American Association of Nurserymen, Inc.; National Swimming Pool Institute; The Fertilizer Institute). The Institute's contribution had been completed on schedule, and the Pflaum Associates were highly complimentary of its quality and timeliness. Unfortunately, two of the other participants seemed to have difficulty assembling all of their materials, which may account for slightly delayed spring release. The Marysville office ordered sample copies of the Supplement for distribution to members. Cost for the participation mounted to the maximum voted at the annual meeting, of which half share customarily has been absorbed by the Lawn and Turfgrass Division of the ASTA (the Institute payment to Pflaum Associates was made in late 1977, but no action has yet been taken by ASTA).

The Marysville office budget was reviewed, and at mid-fiscal year is close to schedule. The proposed federation of turfgrass associations was discussed, but no action seemed called for at this time.

Membership categories were reviewed, as they will be established by the newly revised bylaws (to be voted upon at the annual meeting). Several proposals were referred to the Allmon committee (Sponsoring and Supporting memberships), and the possibility of interesting new members was discussed. Specific cases will be taken up by the President, or by the Allmon committee.

The remainder of the morning was devoted to page-by-page scrutinization of the new bylaws, the master copy for which is in the hands of the Secretary-Treasurer. Mainly involved is an updating of membership categories and relevant dues, and definition of privileges and obligations. Finalized copy will be circulated before formal vote on acceptance is called for at the annual meeting this coming June.

A donation of one thousand dollars was voted, to aid in field burning research in the western producing regions.

VARIETY REVIEW BOARD ACTION

Dr. Gerald Pepin, International Seed, Chairman of the Institute's Variety Review Board, reported that during the quarter action was taken to drop Game from the VRB listings. Dr. Pepin notes that the following cultivars are current with the VRB: Kentucky bluegrass - Adelphi, Arboretum, Baron, Birka, Bonnieblue, Enmundi, Fylking, Glade, Majestic, Merion, Nugget, Plush, Sydsport, Touchdown; Perennial Ryegrass - Citation, Derby, Diplomat, Manhattan, NK200, Omega, Pennfine, Yorktown II; Fine Fescue - Banner, Highlight, Koket, Ruby; Specialty Varieties - Emerald Creeping bent, Highland Colonial bent, Sabre Poa trivialis. Earlier this year Regal perennial ryegrass was approved by the Variety Review Board, adding to the Lawn Institute's list of approved varieties.

REPRINTS FURNISHED

Reprints were furnished Dr. Robert E. Meyers, Recreation Administration, California Polytechnic State University, California.

LAWN PRESENTATION AT LONGWOOD GARDENS

Dr. Schery discussed lawns and lawn cultivars on February 15, as one of the speakers in the formal Longwood Gardens series of winter presentations. Because of deep snow the audience was smaller than might have been expected (usually about 350), but by the same token was highly motivated and interested as proven by their coming at all. Included were a number of prominent horticulturists, county agents, and not least Grace Osburn (widow of the Institute's former President, George Osburn). Social time was spent with the Director, Assistant Director, Educational Director and staff members of Longwood, and a "coffee" attended following the presentation.

The reprint, "Lawns And Their Tending", was distributed as a "capsule summary" of Dr. Schery's discussions, and "Where Are We In The Search For Better Turfgrasses?" given out as a take-home listing of the newer cultivars. Additionally "Starting A New Lawn" was made available, and Lawn Keeping recommended as an economical source of further detail for those wanting to pursue the subject.

Dr. Schery opened his discussion by pointing out that we lived in a disturbed world, and that having lawns really is a highly evolved and efficient means of clothing the urbanized landscape, not a drain on resources. The job is made easier by new grasses and modern products, such as the new bluegrass and perennial ryegrass cultivars, and Nitroform slow-release fertilizer. A series of slides contrasting conditions in Europe with those in United States, and pointing up the essentials of lawn keeping in the Philadelphia climatic zone, wound up the presentation.

TURFGRASS RESEARCH SUPPORTED

A grant of $500 has been made by the Institute to the New York State Turfgrass Association, for support of research primarily through Cornell University. The contribution was actually made late in the previous quarter, but escaped mention in Harvests at that time.

INTERNATIONAL TURFGRASS EDITING CONTINUED

Acting as an Associate Editor for the Proceedings of the Third International Turfgrass Conference, Dr. Schery forwarded additional "reviewed" manuscripts to Dr. Beard during the quarter.

GENERAL GRASS BOOKLET EXPLORED

Dr. Schery prepared for the American Association of Nurserymen the section "Turfgrass Ground Covers" in the "Green Survival" booklet Ground Covers for North America. The AAN has been hesitant about furnishing copies for general publicity use, so that possibilities are being explored for condesning only the lawngrass portion into a smaller, lighter-weight publication which can be used by the Institute for mailings and hand-outs. It would be particularly appropriate for inclusion in the newly begun sunbelt press kits.

GOLF OVERSEEDING STORY PLANNED

Dr. Schery has promised to try to develop a useful southern grass overseeding story for Golf Superintendent magazine, for appearance later in the year.

WOMAN'S DAY STORY APPEARS

The lawn review, contributed by the Institute, to Woman's Day "101 Gardening and Outdoor Ideas" appeared in mid-March. Editor D. X. Fenten had requested considerable color for this story, but the sequence furnished appeared in black-white. Nonetheless the book was attractive, with liberal use of color for other coverage, and a full page color fronting the Institute's contribution, "The Tidy Lawn - - - It's Easier Than You'd Think". Dr. Schery and the Institute are fully credited.

The story opens, "A neat lawn is one manifestation of good housekeeping". Creating a good lawn is likened to baking a cake, - proper juxtaposition of ingredients of good quality (beginning with topflight lawngrasses). A boxed insert of the Institute VRB cultivars appears on the second page. The story then proceeds to discuss mowing, fertilization ("A modern breakthrough with fertilizer has been development of the gradual-release nitrogen, such as comes from ureaform [Nitroform]"), irrigation, weeding, and a series of six steps in lawn patching taken from color transparencies.

The story represents a fairly complete lawn advisory, in a prestigious publication. Assembled from the many continuations in the book, it makes a neat four-page reprint which should be useful for answering inquiries and as a general hand-out. Sample copies have been sent to members.

TIME-LIFE GARDENING YEARBOOK

A courtesy copy of the 1978 issue of the Time-Life Gardening Yearbook was received at the Institute in late February. Time-Life had telephoned the Institute for lawnseed information during preparation. As is typical of so many "big-time" gardening publications, this book is more style than real substance. Topic matter is a potpourri of items involving various parts of the country and the world. No attempt is made to provide gardening instructions, and the book is "unscientific" in the sense that it does not even identify plants by their scientific name (often it is questionable in its "factual" content as well).

Especially of interest (and concern) to the lawn products industry will be chapter five, "Home Lawns Gone Native", subtitled "Gardeners Try an Alternative to Traditional Greensward". This is full of misconceptions about how home grounds let go wild are more economical, and an "improvement" over keeping them in lawn. It confuses useful, attractive ground cover around the home with highway berms left unmowed (largely for reasons of economy). Author Prendergast quotes a highway landscape architect to the effect that "Natural growths are being encouraged; 'they are cheaper, given better erosion control and look better'", all highly questionable when applied to home grounds.

Prendergast asks, "Does this mean that the perfectly groomed home lawn - - - is finally losing its prestige value? As a piece of outdoor furniture, is the lawn going out of fashion?" He implies the affirmative. He cites "increasing unwillingness on the part of Americans to exert the effort necessary to keeping a lawn up to American standards, which requires evergreen grass, no weeds and neatly trimmed edges. Perhaps more ominously an antilawn heresy was spreading [in 1977]". He goes on to cite how courts have upheld individuals' rights not to mow their lawns, and implies that these few special cases (usually with spacious properties) are applicable generally.

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TIME-LIFE GARDENING YEARBOOK - Continued

As has been noted elsewhere, and reflected in the spring press kit and "Supplement" stories, the time has come to counter some of the let-the-lawn-go misconceptions. For example, Prendergast makes the unsupportable statement that "Establishing turfgrass over large areas costs $600 an acre; prairie grasses cost half that amount and require much less maintenance." In almost all of the eastern United States this is erroneous. Not only could an acre be seeded for less, but prairie grass seed would cost more if available at all (and the species would not persist in any event)! We hope to counter such unscientific analyses with sounder ecological fact, and have in press at present a "rebuttal" (Brooklyn Botanic Garden Plants and Gardens) which members can take advantage of for general distribution of reprints.

COUNTER TO ANTI-LAWN SENTIMENT

It is anticipated that very soon the story "The Alternative To Lawns" done for Plants and Gardens (Brooklyn Botanic Garden) will appear in print, and reprints made available. The threat of anti-lawn sentiment engendered mostly by the "environmentalist school" is discussed at length in "Lawn Products Sales Challenged" (Seed World).

STORY FOR SEED WORLD

For the special "Turf" issue of Seed World, publisher Glenn Wiklund telephoned the Institute for assistance. A feature story was prepared ("Lawn Products Sales Challenged"), as part of the battle against anti-lawn sentiment. A color transparency for possible cover use, and two black-white illustrations were also furnished. We hope that appearance of this story will pursuade readers of Seed World to help counteract the anti-lawn expressions which seem to be spreading.

AMERICAN NURSERYMAN SERIES ON SCHEDULE

A series of three stories for American Nurseryman slanted particularly towards garden center personnel, will appear as scheduled. Editor Allen Seidel writes, "The first article in your three-part series on lawn care will appear in our April 1 issue, and will conclude in the May 1 issue - - -".

FERNWOOD LAWN DISCUSSIONS PLANNED

Dr. Schery has been invited by Fernwood Inc., an endowed educational preserve at Niles, Michigan (near Chicago), to discuss lawn matters for the "Home Landscape Maintenance" session on Saturday morning, April 8. Slides are being used, and reprint literature distributed. Stan Beikmann is director of Fernwood.

MAILING LIST BROUGHT TO DATE

Receipt of the latest membership list for the Garden Writer Association of America enabled Mrs. Scheiderer to update press kit mailing addresses and develop new ones. A semi-annual culling of the mailing list occurs with each PK issuance, bringing as it does returns for obsolete addresses. Keeping the mailing list current is a continuing staff task.

TECHNICAL MAILING MADE

Seventy three parcels of Institute literature (reprints) were mailed the end of March, on the "reciprocal literature exchange" program, engaged between technical experts nationwide, mostly members of the American Society of Agronomy. Included were: "Lawns And Their Tending", "Baker Dozen of Worst Weeds", "Fertilize The Lawn. . Also", "Lawn Basics", "Starting a New Lawn", "Autumn Care for Lawns", "Care of Lawns in Europe not Special as U.S.", "Lawn Care, Troubles, Causes, Cures", "Where Are We In The Search For Better Lawngrasses","Curious About Cultivars", "Lawn Seeding For All Seasons", "What You Should Know About Quality Seed Testing", "Lawn Ecology", "What Is The Grass", "Lawn Fertilization", "Lawns Come Into Their Own", "The Value of a 'VRB' For Better Turf", "How Stands Your Grass", "The Tidy Lawn . . It's Easier Than You'd Think", "Rally 'Round The Ryegrass"

SWEDISH AMERICAN CHAMBER OF COMMERCE CALLS

Mr. B. Fasth, Swedish American Chamber of Commerce, New York, telephoned asking for information on what type of grass grows in different parts of the United States. Four reprints, and follow-up correspondence quickly followed.

LAWN INTEREST HOLDS HIGH

A continuing series of telephone inquiries, and the usual correspondence to the staff offices, indicates that interest in lawns holds high. Custom answers are given where possible, but are expensive to service: here is where the value of a wide assortment of reprints pays off, quickly stuffed into an envelope.

TIE LIAISON CONTINUED

As liaison representative for the Crop Science Society, Dr. Schery has maintained communications with the Institute of Ecology. TIE headquarters are now at Butler University, Indianapolis. President Malone, in response to Dr. Schery's suggestion that measures be taken to better inform the public (and the professionals) about the ecological usefulness of lawns, states, "I am persuaded that the issue you have, should be included among the topics that will be treated in the non-advocacy mode we envision as a responsibility of TIE, - - - ".

INQUIRY FROM TURF NEWS MAGAZINE

Dr. Wendel Mathews, Turf News Magazine (Page Productions), Illinois, telephoned expressing interest in having an Institute story for his publication. He was provided sample reprints, and will communicate further concerning his needs.

INTEREST FROM AUSTRALIA

Pronounced interest from "Down Under" seems to have surfaced during the quarter, to judge by correspondence from Australia. Requests have ranged from that for membership by agronomists in the Australian Department of Agriculture, to requests for "complete information" on growing, harvesting, and cleaning of a grass seed crop by seed merchants.

OFFER FROM AUSTRALIA

The Department of Commerce forwarded to the Institute an offer from an Australian firm "Seeking to license its recently invented implement for hand aerating turf surfaces." We have not seen the implement, and know nothing of its effectiveness, but further information can be secured from Mr. Charles Smith, Better Methods, 274 Forest Rd., Bexley, N.S.W. 2207, Australia.

FOR CHICAGO TRIBUNE

Special feature editor Paul Weingarten of the Chicago Tribune telephoned the Institute for details about the history of lawns and their rise to importance. Apparently the Lawn Institute will receive mention and credit. If any members in the Chicago area come across this feature when it appears, we would be pleased to have a tear sheet.

GARDEN SECTION PHOTO FURNISHED

A telephone call from Al Spitler, the St. Louis Post Dispatch, asks if Institute might furnish a nice lawn scene (color photo) for the cover of an upcoming gardening section in the newspaper. A Hasselblad transparency was immediately sent. Full credit is promised, and use of Institute press kit stories in the section.

BLUEGRASS HOLDS UP WELL DESPITE WINTER BLIZZARDS

It has been another "record" winter on the Institute grounds, and in Ohio generally. This year, although average temperatures were about the lowest on record. Cold was not so much the problem as were blizzards and heavy snow, drifts of which lasted into April. At the base of the snow pack was a lot of water, sometimes ice, and a great deal of weight, although the soil was in general protected and barely frozen. As the snow cleared it was noted that the bluegrasses held up better than other species, generally being erect and resilient if normally mowed. The perennial ryegrasses matted down more, and in some cases may be lost due to smothering. Of course they are not firm under foot in soft soil, as is rhizoming bluegrass. Fine fescues have been rather intermediate in these respects, and bentgrasses have suffered considerable snowmold damage. The experience suggests the wisdom of including bluegrass with perennial ryegrass for plantings in this region.

AN APPRECIATION

"I look forward to your information each season and don't want to miss it after the many years you have sent it to me. It is very valuable - - - ", C. A. Harris, Garden Column Syndicate.

"A CBS SPECIALS 'THANK YOU'"

"We were absolutely delighted with your long and informative article. It certainly added tremendously to the value of our magazine, - - - So let us say, thank you again", - Marion Lyons, CBS Consumer Publishing.

TECHNICAL SECTION

MICHIGAN TURFGRASS CONFERENCE

Proceedings for 1977 Michigan Turfgrass Conference were recently received from colleagues at Michigan State University. Considerable on-going research is summarized, and some cases with final conclusions are yet to be developed. A few highlights that may be of interest to lawn seedsmen follow.

Moderate rates of nitrogen fertilization were better than either no fertilization or heavy fertilization for helping control the increasingly important anthracnose disease of turfgrass. Almost all fungicides were more effective on fertilized turf, especially when fertilized early in the season. The authors state, "It is important to combine both the benzimidazole systemic fungicides and the contact fungicides in the control program for anthracnose. Otherwise, resistance by the anthracnose fungus (Colletotrichum graminicola) could develop to the systemic fungicides."

Another extensive study related to various diseases and their controls by a wide assortment of fungicides. Many of the fungicides, combined with good lawn care, helped control Fusarium. Good Helminthosporium control required spraying each two weeks. A benzimidazole-resistant strain of dollarspot (Sclerotinia) did not respond to a number of familiar fungicides, although others did work.

Control of Veronica filiformis has been difficult, since the species is resistant to 2,4-D (and many other familiar herbicides). Control with endothall is possible, but the treatment is "touchy" (possibility of injury to the turfgrass). Glyphosate was effective in wiping out Veronica, but of course killed the turfgrass too, and necessitated reseeding. The wetable powder formation of DCPA gave a high level of selective control of Veronica at a 12 lb./A rate. Disappearance of Veronica under DCPA spraying is slow and gradual; it would be the recommended control in Michigan at present

No conclusive benefits were found from wetting agents or gypsum. High nitrogen fertility, and especially spring fertilization, have caused increase in Poa annua. The antagonistic effects of arsenate and phosphorus were reaffirmed. Liming reduces the effectiveness of arsenate in inhibiting Poa annua. Poa annua is strongly favored over fine fescue under high fertility. Over a 13 year span there was much Poa annua invasion (of Merion bluegrass) when the turf was mowed at 1 inch, almost none when mowed at 2 inches. Wetting agents did help with hydrophobic soils. Merion plantings 13 years old were still 90% Kentucky bluegrass if fertilized at the rate of 6 pounds annually, but heavily invaded by other volunteer grasses at lesser fertility levels. However, the researchers note "Merion is susceptible to Fusarium blight and stripe smut, both of which tend to increase in severity with higher nitrogen fertilization". Incidentally, sodded plots seem to require slightly less fertility than seeded plots, to maintain themselves.

Shade studies (especially with Nugget bluegrass) indicated that high mowing and moderate fertilization rates helped maintain the grass; so did fungicide applications. Autumn fertilization was best. At Traverse City, fertilization with Milorganite strongly favored Poa annua and Poa trivialis (in overrunning Merion Kentucky bluegrass) compared to other fertilizers. Other papers deal with bluegrass physiology, golfer reactions, fertilizer calibrations, aerification, compatability of pesticide-fertilizers, renovation (using Glyphosate), the sod market, comparison of dry and liquid application, and suchlike.

In a discussion of Kentucky bluegrass cultivars to be used for sod production in Michigan it was concluded that a blend of cultivars is best, of cultivars that resist

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melting out, Fusarium and stripe smut diseases. Suggested candidates are Adelphi, Majestic, Touchdown, and Parade. Another study examined the possibility of infrequent mowing for sod production (and there are suggestions that certain cultivars may respond better than others to this procedure). Weedy annual grasses become a problem with infrequent mowing. When mowing is delayed 8 or 10 weeks, Glade and Nugget did not compete as well as did Merion, Adelphi and a blend of cultivars. Infrequent mowing does reduce energy costs, but requires added facilities for handling the "hay" when mowing is resumed, and additional time to bring the sod back into dense, low-mowed quality. When mowing is neglected for more than 4 weeks, sod density is markedly affected.

Engle reported on sod production in New Jersey. He noted that sod usage seems to be declining, partly as a result of the new perennial ryegrasses substituting, and partly because of some bad experiences with sod. New Jersey has found thinner cut sod to give quicker rooting. Nitrogen fertilization of the seedbed seems to make little difference so far as early rooting is concerned. Uncovered sod rooted earlier, but greened up slightly later than that which was covered with a canopy. No material difference could be found in rooting comparing sod grown on mineral with that from muck soils. One of the difficulties is sodding shaded locations, and no good technique is available for supplying fine fescue-bluegrass sod for such areas.

Vargas winds up the Proceedings relating disease to nitrogen fertilization. Diseases the severity of which is increased by nitrogen fertilization include Pythium, brown patch, Fusarium, stripe smut, Typhula and Helminthosporium; a decrease in severity of disease under nitrogen fertilization is experienced by rust, red thread, dollarspot and Anthracnose. A chart showing seasonal stimulation of disease by fertilization at that time of year is given (practically any time of year can cause some disease problem), but Vargas would suggest about a half pound nitrogen in mid-June, mid-July, and mid-August; a full pound in September; and another pound for "dormant" feeding in December.

REPORT FROM KANSAS

Dr. Robert Carrow, Secretary for the Central Plains Turfgrass Foundation, includes this information in his March Newsletter: Anticipate a year of crabgrass abundance (plenty of seed and soil moisture). Use disease-resistant bluegrass cultivars, especially to control Fusarium. Rugby, Majestic and Park bluegrasses are recommended for low maintenance; Merion persists, too (contrary to general expectations).

Adelphi and Glade have rated "excellent" under moderate maintenance. "Very good" are Baron, Sydsport, Majestic, Bonnieblue, Touchdown and Galaxy. Glade is recommended for shade, but readers are advised to avoid Baron, Park and Victa.

Merion, Majestic and Baron have shown good tolerance (in Colorado) of iron deficiency. Intermediate are Touchdown, Sodco and Newport. Showing severe iron deficiency symptoms are A-34, A-20, Adelphi, Arboretum, Park, Sydsport, and Nugget.

Bluegrass billbug is cited as a prevalent new hazard to Kansas lawns. Overwintering adults lay eggs by early summer, the larvae feeding on stems and eventually even deeper roots (the problem then having similarities with soil grubs). Since it is difficult to reach larvae in the soil with an insecticide, preventive spraying against adults in May is suggested.

WEED RESEARCH AT RHODE ISLAND

Dr. Jagschitz, University of Rhode Island, kindly forwarded abstracts of his research papers reported at various conferences since 1954. A few mentions may be of interest.

Familiar broadleaf weed controls did have some inhibitory effects on transplanted Kentucky bluegrass. Seven years of use of pre-emergence herbicides at standard rates did not visually thin grass stands, although fescue was somewhat reduced in favor of bluegrass and bentgrass (especially at higher fertility levels).

Selective yellow nutsedge control was achieved with several herbicides, although bentazon (especially with repeat application at low rates) was least damaging to the bluegrass. Post-emergence control of crabgrass is effective with arsonates but at the expense of some injury to the turfgrass. An experimental material (HOE-22870) proved quite effective without so much injury to the bluegrass.

For renovation, paraquat resulted in some stand reduction of new seedings, especially if the application was close to seeding time. Neither cacodylic acid nor glyphosate had much effect. In many cases clover was very difficult to control with the renovation chemicals, and seldom was a treatment 100% effective with any of the chemicals. Mowing height or timing made rather little difference. Best control of old vegetation was with repeat treatments.

Activated charcoal helped protect new seedings from residual chemicals (but not, for example, from tricalcium arsenate). Charcoal coated seed could be used. Sometimes charcoal improved grass stands in soils having had no herbicide treatment. In general charcoal application to chemically treated soil showed less grass injury and greater rooting strength to transplanted sod.

Butralin, DCPA, oxadiazon and H-22234 provided effective pre-emergence control of goosegrass (1975 testing).

PATHOLOGY REPORT FROM RHODE ISLAND

"Evaluation of Some Turfgrass Fungicides - 1977" was issued from the University of Rhode Island by Jackson and Dernoeden in late February. The problem of keeping track of recommended procedures for disease control shows no improvement. Numerous fungicides are effective under special circumstances, many of them still "experimental" and identified only by code designation. Additional diseases seem to be becoming important (in Rhode Island "Yellow Tuft" and "Ophiobolus"). Complicating the situation for the householder is the recommendation that most spray treatments be made in a continuing series each 7-10 days. A relatively new product, Bayleton, had generally excellent ratings in these trials. The report devotes its final 4 pages to a listing of recommended treatments in Rhode Island, according to disease; it's handy to have at hand since remembering which of the many available fungicides are particularly effective against which diseases, at what rates, is almost impossible.

GROWTH RETARDANTS GIVE DUBIOUS RESULTS

Research reported in the November-December, 1977, Agronomy Journal, conducted in Virginia by Schmidt and Bingham on Baron Kentucky bluegrass, indicate certain disadvantages (some damage to foliage, repression of roots, occasionally delayed seedhead formation). Erratic results with several prominent research retardants give little cause for optimism.

WEIBULL'S GRÄS TIPS RECEIVED

The Weibull's year-end research report, Gräs Tips, was received from Sweden this quarter. The publication is always well done, and, fortunately for Americans, carries a summary of the reports (mostly written in Swedish) in English. Many of the reports bear upon varieties prominent in America, and upon problems that are common to the turfgrass world everywhere.

The first article, by Peder Weibull, examines the different species of rust which attack Kentucky bluegrass. Resistance of a variety to one rust is no guarantee of resistance to another. Geronimo bluegrass, for example, seemed immune to Puccinia striiformis, yet was one of the most severely afflicted varieties to P. b. poae-nemoralis. Many familiar varieties were severely stricken by at least the former species, although in general Sydsport gave a pretty good account of itself.

A series of reports by Sven Dahlson follow. Growing conditions in northern Sweden were contrasted with those in the South. Again Sydsport showed up well, better than Birka and Merion. Red fescue was not so good as bluegrass, but several cultivars were superior to Pennlawn. Colonial bentgrasses were not satisfactory in the extreme North.

In another study Anthracnose disease was found to attack Emerald creeping bentgrass on a golf green, although the disease is not so serious in Sweden as in America. Different forms of fairy ring are examined and classified in another presentation, with two chemicals (carboxin and oxicarboxin) useful in controlling the fungus.

Topdressing, including organics, is reported upon in another presentation. And the tolerance of red fescue to high salt concentrations is examined. It was not entirely clear from the English summary at just what stages (including germination of the seed) the fescue was subjected to regulated saline solutions, but in all cases it was concluded that the Polar variety was superior to others in salt tolerance (familiar varieties in the test included Koket, Highlight, Dawson, Jamestown, and other familiar names).

Peder Weibull summarized the tests of lawn Kentucky bluegrass from 1972 through 1976. In general the newer, improved varieties proved superior in the ratings to the "common" types (Kenblue, Primo, Arista, etc.). Warren's A-34 was frequently top-rating, but followed closely by Sydsport, Birka, Merion and Birdie. Nugget was intermediate, Windsor fairly low. Eagle, A-34 and Nugget showed the greatest turf density. A general drop off of quality occurred as the years passed, especially with common types and Nugget. Nugget also fluctuated rather markedly seasonally; it was among the best in summer, but rated poorly through winter. Sydsport tailed off slightly during winter, but A-34, Merion and Birka "showed good performance all the year round".

WEED GRASS CONTROL IN BERMUDAGRASS

Johnson, Georgia, reports in the November-December, 1977, Agronomy Journal on treatments to control crabgrass and goosegrass in bermudagrass. Crabgrass was rather well controlled by MSMA or methazole, but not so well by metribuzin. MSMA, however, did not control goosegrass satisfactorily, unless applied in sequence with profluralin, oxadiazon or napropamide. However single treatments of methazole or metribuzin did control goosegrass used post-emergence. Methazole and metribuzin can be used with centipedegrass as well as bermudagrass, but should not be used with st. augustine or bluegrass.

NITROGEN CYCLING IN GRASS

A study on shortgrass prairie, by Clark, Colorado, is reported in the Autumn 1977 Ecology. Radioactively marked nitrogen was followed from an initial treatment, to learn how it was cycled and recycled. The initial application appeared largely in herbage the first growing season, but a portion of this was translocated back to the underground parts towards the end of the season. Much of the remaining nitrogen was recycled through decay of the litter, and like that nitrogen translocated to the below ground parts became available for another year's growth. In this fashion most of the nitrogen was used over and over again through the years. A portion was tied up in humic compounds, to provide slow-release nitrogen. Compensating for any losses were additions from natural sources, including mineralization and nitrogen fixation by microorganisms. Thus most nitrogen entering the system is quickly recycled, but a minor portion polymerized (into humic materials) to be slowly recycled.

ECOLOGICAL COMPLEXITY OF MATURING LAWN

An inkling of what might be the case as lawns progress from a juvenile to a mature phase, is given in research reported by Rice and Mallik, in the Autumn, 1977 Ecology. Studying old field succession in Oklahoma the researchers noted marked differences in microorganismal populations, as progression from a relatively high carbohydrate-lignin ratio to a lower one occurred. Not only were there quantitative differences in the fungus population of the soil, but qualitative differences arose as well (seventeen of 51 initial species of fungi never occurred in soil amended with climax materials, for example). No single chemical factor could be found, but obviously in toto residues representing late successional phases reduced carbohydrase activity by the microorganisms.

SOIL TESTING EXAMINED

The Pennsylvania Agricultural Experiment Station kindly sent reprints of scientific papers appearing in Commun. in Soil Science and Plant Analysis 9 (1), 1978. A report by Turner and Waddington on "Survey of Soil Testing Programs for Turfgrasses" may be of particular interest to members.

Soil samples from 7 test locations were sent to several well-recognized soil-testing laboratories (Penn State, Michigan State, Sewerage Commission, VPI, Maryland, Rhode Island, Rutgers). Laboratories using the same soil testing solutions reported generally similar results, but even then there were wide variations in recommendations. A reading (as with pounds per acre of phosphorus) considered "low" by one laboratory was often considered "very high" by another. At a given pH reading one laboratory might recommend no lime, another as much as 180 pounds per 1,000 sq. ft.! While some of these discrepancies may be explainable by general differenees of the regions, it is obvious that soil testing is not a very exact indication of fertility needs, at least as interpreted for turfgrasses.

GRASS COMPETES WITH SHRUBS

Research done at Rhode Island, by Nielsen and Wakefield, is reported in the Jan.-February Agronomy Journal. Four familiar ornamental shrubs were grown surrounded by grass cover, or with the grass removed (bare ground, or mulch). In all cases presence of grass held back shrub growth, presumably because of competition for nitrogen (phosphorus and potassium seemed to make no difference). When supplementary nitrogen was applied, the grass appeared more "voracious" in gaining it than did the shrubs.

MICHIGAN RECOMMENDS CULTIVARS

Dr. Kenyon Payne, in a "Turfgrass Variety Update" published in the 47th Annual Michigan Turfgrass Conference Proceedings lauds these bluegrasses as being relatively resistant to leafspot, Fusarium and stripe smut: Adelphi, Baron, Cheri, Majestic, Parade, Sydsport and Touchdown. Manhattan, NK-200 and Yorktown perennial ryegrasses are applauded as good companions for bluegrass.

FROST AIDS QUACKGRASS CONTROL WITH GLYPHOSATE

Research at the University of Wisconsin, reported in the January issue of Weed Science, showed that glyphosate (used slightly less than half pound per acre) was only 10% effective against quackgrass when applied 4 days before the first frost, but 91% effective if used the day after first frost. Thus the most effective time for controlling quackgrass Agropyron repens, with glyphosate seems to be immediately after a frosty night.

BERMUDAGRASS SURVIVES LOW pH

Research by Lundberg et al, W. Va., reported in the Agronomy Journal, November-December 1977, dealt with colonizing strip mine spoils banks with several strains of bermudagrass. The soils were very poor, with a pH as low as 2.9. Surprisingly, Tufcote bermudagrass survived well at a pH as low as 3.4. Other strains of bermdagrass were higher yielding when soil was limed to slightly higher levels. Bermudagrass is usually regarded as profiting from a fairly high pH, but in these tests there seemed little advantage in liming much beyond a pH of 4.0 so far as bermudagrass yield was concerned.

UREAFORM AND IBDU COMPARED

Waddington et al, reported upon "Turfgrass Fertilization with Isobutylidene Diurea and Ureaform" in the Proceedings of the 1977 Controlled Release Pesticides Symposium, a reprint of which was received from Penn State recently. In general IBDU provoked greater response and less uniform growth in the first two years, but these differences decreased in time. IBDU was affected more by irrigation than was ureaform, understandable in that the nitrogen release with IBDU is by hydrolysis rather than by microbial action as with ureaform.

GRASS FERTILIZATION REPORT

Waddington et al, report upon "Long Term Evaluation of Slow-Release Nitrogen Sources on Turfgrass", in the July-August 1976 Soil Science Society of America Journal, a reprint of which was recently received from Penn State. Milorganite, ureaform, and IBDU produced more uniform growth than did soluble sources of nitrogen (even if coated). The authors found that the greatest increase in response over a seven year period occurred with ureaform, which gave rather little response the first two years; in later years its yield, color and soil nitrogen levels showed that it had the greatest residual effect.