

BETTER LAWN - - HARVESTS

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ANOTHER YEAR BECKONS

May we, at the staff office, take this occasion to thank the Institute membership for fine support during 1979, and to wish them well for the year ahead and the upcoming decade. We are grateful to President Doyle Jacklin for disrupting his personal activities so often in behalf of the Institute, and to Secretary-Treasurer Robert Russell for the "grubby" tasks of co-signing checks, auditing accounts, working out payroll taxes, and suchlike.

Nineteen seventy nine efforts have borne considerable fruit, especially considering the nearly fixed income inherent with the Institute in an era of inflationary expenses. Press mailings and published stories continue to be well received, and the Institute has performed in a professional fashion living up to its respected stature achieved through the years. This is not to say there are not things we may have overlooked, and suggestions are always welcome. Particularly helpful would be your mention to editors, especially of those magazines in which you advertise, suggesting that the Institute be called upon for informational articles.

Thanks to all, and with all best wishes for the year ahead - Diana Scheiderer, Robert W. Schery.

INSTITUTE'S PRESS KIT READIED

Our regular press mailing for the spring season, in its familiar grass-foliage file-folder, received final preparation during December and is in the hands of Middleton Printing for production and mailing by the first week of February. Included are 17 pages and a covering letter, embracing 26 titles. As is customary, three back-up reprints are included, on this occasion "How to Handle Your Lawn In Summer" from Flower and Garden; "New Lawngrass Cultivars Available", from Lawn Care Industry; and "Rx for Damaged Turf", from Horticulture magazine. In an effort to keep costs somewhat under control the mailings will be made by bulk permit, which seemed to work quite well in 1979.

SOUTHERN PRESS MAILING BEING MADE

In order to keep contacts "alive" in the South, the Executive Committee wished to continue press mailings there for the spring of 1980. Southern editors and writers are contacted through first class mailings in envelopes used for normal correspondence. We limit weight to 2 oz., which is sufficient this spring for 7 titles of text and two print-outs ("How to Handle Your Lawn in Summer", from Flower and Garden, and the colored folder "Lawns Across America").

REVISED HANDBOOK ISSUED

A revised printing of the Plants and Gardens "The Home Lawn Handbook" (Brooklyn Botanic Garden, No. 71) appeared at year-end. The first printing was in 1973, with Henry Indyk as the guest editor. The Botanic Garden asked that in revising the Institute's contribution, that changes be minimal and held to essentially the same spacing as in the initial printing, to save expenses. However, it would seem that up-datings of such items as Dr. Funk's listing of new cultivars required extensive reworking.

The book is an excellent general reference, well illustrated, 84 pages, and is available from the Brooklyn Botanic Garden (1000 Washington Ave., Brooklyn, New York, 11225) for the reasonable price of \$1.95 (plus 60¢ postage and handling, 10¢ for each additional copy). In general the illustrations are black-white, but for lawn disease identification ten color plates are provided. The volume, unfortunately, still does not follow the Agronomy Society's "rules" for spelling and combining of common names (Bermuda grass, instead of bermudagrass, for example). The discussions are authoritative and understandably written. It is not possible to review each contribution individually here, but the breadth of coverage can be discerned by the table of contents, viz.:

A New Lawn Step-by-Step	Robert W. Schery
Buying Lawn Seed.	Robert W. Schery
The Lawn and Its Soil	R. B. Alderfer
Soil Tests in Lawn Fertilization	C. G. Wilson
Lawns Need Fertilizer and Lime	C. R. Skogley
Lawns and Water	Fred V. Grau
First Aid for Failing Lawns	W. H. Daniel
Instant Lawns from Sod	James B. Beard
Lawns in Shade and on Steep Slopes	Ralph E. Engel
Diseases of the Home Lawn	Herbert Cole, Jr.
Injurious Insects of Lawn Grasses	Herbert T. Streu
Thatch and Its Control	Henry W. Indyk
Weed Control in Lawns	J. J. Duich
Lawn Grasses and Mixtures for the Cool-Season Region	C. R. Funk
List of Cool-Season Turf Grasses in the United States	C. R. Funk
Questions and Answers on Zoysia in the North	Henry Indyk
Lawn Grasses for the South . . . and their Maintenance	Glenn W. Burton
An Attractive Warm-Season Grass Lawn	Victor B. Youngner
An Attractive Lawn in the North	Ralph E. Engel
The Right Equipment	J. R. Watson

INSTITUTE CONTRIBUTES TO MASS MAILING

SCW, Inc. of New York and California telephoned the Institute for informational materials to be included in a nationwide mailing to a few thousand outlets, to be distributed after the first of the year. We were pleased to furnish press kit text and five printed stories, with the request that if the latter are utilized they be properly credited. We are not familiar with SCW releases, but gather that it is something on the order of the cooperative "Supplement", with costs borne by sponsors. Alice Lake of the New York office indicates that the materials are organized as gardening inserts, especially to be used by small newspapers and local publications.

NURSERYMEN INVOLVED WITH TURFGRASS

Nurserymen seem increasingly important for directing usage of seed and sod, especially in conjunction with contractors. A number of regional nurserymen associations are thus being added to Institute mailings.

ORTHO BOOKS ISSUED

In November the Institute received with the compliments of editor Yee, the three editions (West, South, Midwest/Northeast) of the Ortho Books, "All About Lawns". Each edition carried a different cover picture, but differences within are relatively slight. A few switches in photographs and drawings of pests and suchlike are the main concession to regionalization. However, each edition does carry an itemized "review" of the states in that particular region, as a sort of summarization near the end of the book. All editions run 96 pages, with the inner back cover devoted to tables of weights and measures.

The books are printed like a magazine (8" x 11"), on slick, glossy paper, elaborately and beautifully illustrated in color. The cover price is \$4.95, which would seem untenably low if the book were not subsidized by a company of Chevron's dimensions. The books are written and edited "in house", but include a broad assortment of consultants and "acknowledgements" (among the latter our own VRB member, Howard Kaerwer). Bill Meyer, of Turf Seed, was one of the consultants.

The quality and thoroughness of the preparation must be acknowledged. Objections to the factual material would largely be of the nit-picking sort. Undoubtedly some errors do occur (it doesn't seem reasonable, for example, that the maximum/minimum temperatures given for various cities in various states can be accurate, when Lafayette, Indiana carries a 17/-3 reading for January while nearby Indianapolis is 36/20!). One might wonder, too, why st. augustinegrass, centipedegrass, bahiagrass, and dichondra are equally featured with cool-season species in the "Midwest/Northeast" edition (although Zoysia and bermuda might overlap, at least into Kentucky and Missouri).

All in all these books are remarkably well done, understandably written for the non-specialist. It is questionable that a section on irrigation apparatus, detailing a good many steps akin to "plumbing", would fall within the capabilities of the reading audience, and would perhaps better have been left to the professionals.

BLUEGRASS REVIEW

The November Grounds Maintenance carried a "Kentucky Bluegrass Cultivar Update", authored by Jim Beard. The familiar characteristics of Kentucky bluegrass are reviewed in a brief text, and thirty four varieties characterized in three and half pages of tables. Most of the Institute's Variety Review Board selections are included.

Unfortunately, this sort of presentation is tedious, not well designed to compare cultivars. A few brief comments are given concerning each under the headings of "description", "adaptation", "pests", and "other comments". Most cultivars are quite similar in most of these categories, and vary more with cultural conditions than in inherent characteristics. Almost all show resistance to the majority of diseases, and establish well if high quality seed is utilized. However, publicity such as this is helpful in keeping up new cultivar interest.

INFORMATION BY CARTOON

"Thank you for your recent letter and interest in our scriptographic booklets. Your suggestions concerning the development of a booklet on lawn maintenance is a good one and we will consider it." - Peter C. Colt, Channing L. Bete Co., Inc., Greenfield, Mass.

STORY SENT COUNTRY GENTLEMAN

A story tentatively entitled "City Lawns For Country Cousins" was prepared in November, for appearance in Country Gentleman magazine in late winter. General background is emphasized. The story opens by pointing out that with today's fine grasses and products, a "city" lawn can be had with little trouble even in the country. The Lawn Institute Variety Review Board cultivars are listed in a box. Basic considerations and fertilization, mowing, watering and pest control are then reviewed, with hints given as to how effort might best be spared without sacrificing reasonable lawn quality.

STORIES IN WESTERN LANDSCAPING NEWS

Several Institute items were utilized in the October issue of Western Landscaping News. "New Lawn: Seed or Sod?" was featured, with credit to the Institute, while other items were assembled in a later potpourri section under the titles "Turf Give-and-Take", "Bluegrass Tolerates Heat Better" and "Soil Acidity Can Have Secondary Affects", all mentioning the Institute. The October issue of this revamped magazine was the first under the editorship of Lou Nelson (a young lady), who also served as interviewer and information-gatherer for some stories in the issue.

TEXT READIED FOR SCIENCE ENCYCLOPEDIA

The McGraw-Hill Encyclopedia of Science and Technology is due for revision in 1980. Dr. Schery and the Institute have been invited to contribute the section on Lawn and Turf Grasses. This was prepared in November. The discussion opens with a description of lawngrasses in general, and their major uses. The advent of cultivar selection and breeding is reviewed at some length. The 1980 listing of Lawn Institute Variety Review Board cultivars appears as a table. A distributional map is provided, with genera appropriate to both North and South listed. Management generalities for the various lawngrasses are briefly reviewed, and it is suggested that the best counter for disease is to plant disease-resistant cultivars. A bibliography of several titles, including Lawn Keeping, terminates the discussion.

"NATURAL LAWNS"

The Fall issue of Weeds Today carries the news item that the city council of Madison, Wisconsin approved an ordinance whereby residents will be allowed to grow a "natural lawn", anyone so desiring, if approval is received by more than half of the neighbors. Moreover, a three-foot buffer zone between a natural lawn and ones of the traditional lawngrasses would be required. This might sound appealing to folk who don't want to be bothered with mowing and other lawn cares, but the council's ecological understanding is due for some surprises if it anticipates that native prairie plants rather than the many introduced weeds (and eventually woody plants) will volunteer. The word "natural" will certainly have to be stretched to include Old World adventives, the most aggressive weeds infesting lawns.

NEW YORKER INTEREST AROUSED

Calvin Trillin, New Yorker Magazine, telephoned for lengthy discussion about mowed vs. unmowed lawns. He was preparing a review for the magazine that could arouse considerable interest. In addition to the telephone discussion, literature was furnished Mr. Trillin as background for his article.

NEWSPAPER MAILINGS

During the quarter production was begun on our own press kit, sent to major newspapers and editors nationally, as well as the Institute's contribution to "The Living Landscape" (formerly the "Supplement") in cooperation with several other associations. Coincidentally, North American Precis Syndicate of New York sent a summary concerning newspaper mailings. It may be of interest.

NAPS indicates that of total daily newspaper circulation, only 30% is represented by papers with a circulation greater than 25,000 (those to whom our own press kit primarily goes), while 70% is represented by circulations of less than 25,000 (serviced especially by the joint "The Living Landscape"). Considering weeklies as well as daily newspapers, 94% of the publications are represented by circulations of less than 25,000. It is evident that the smaller publications can be influential!

NAPS feels that oftentimes smaller newspapers are hungrier for prepared materials than larger ones, and with a more sympathetic editorial policy. Some 3800 editors are involved in such mailings. Developing their good will is thought to be worthwhile.

So far as the Institute is concerned, we were pleased to utilize both channels, - editorial materials for the bigger circulation journals sophisticated enough generally to have their own garden departments; and newspaper-format preparations for the smaller circulation publications ill-equipped to develop stories editorially.

OFFBEAT LAWN INTEREST

As has been anticipated (see previous Harvests), interest continues to grow in "natural" or "prairie" lawns in place of the conventional sort. One of the most recent instances was inquiry from Sandra Beckwith, Madison, Wisconsin who writes, "I am gathering materials for a book called "How to Grow a Prairie Lawn", and asking for literature and information. In a polite way the Institute tries to point out that establishing and maintaining prairie grasses is far more difficult and expensive than when utilizing traditional lawngresses, and on most soils in eastern climates an impossibility for the great majority of people.

GALLUP REPORT

Gardens For All engaged the Gallup Organization to conduct a survey on gardening. While not directly applicable to lawns and lawn care, some of the trends can be instructive. Of greatest direct interest was that lawns/yard care showed the highest percentage of any "garden activities of American households" in 1979, well ahead of houseplants, vegetable gardening, flower gardening and fruit/berries. Lawn/yard care had a 56% rating, 14% above 1978, with the greatest percentage gain of any of the categories.

If the typical "gardener" also indicates custodian of the home lawn, 33 million households are represented, with new devotees primarily college-educated. Vegetable gardening was practiced by 42% of the households, exceeded by only 7 other of the 23 activities surveyed (television watching, listening to music, hobby cooking, book reading, and pleasure trips were the 5 leading activities). Most gardeners gained information from friends and neighbors. Biggest problem was insects, with weeds a close second only in the Midwest (apparently not much of a problem in the East, South, and West?).

TECHNICAL SECTION

VISIT TO SOUTH COAST EXPERIMENT STATION, SANTA ANA, CALIFORNIA

On December 19 it was possible for Dr. Schery to spend the day with supervisor Stan Spaulding at the Santa Ana South Coast Experiment Station, inspecting the plantings and discussing turfgrass research in southern California. Performance of cultivars at Santa Ana is often quite different from that in other parts of the country, exemplifying basically arid conditions with irrigation necessary. Much attention is being given to minimum irrigation these days, what with Arizona demanding its full share of Colorado River water (which California had been enjoying as "surplus" heretofore). Several studies are underway to determine the most efficient means of irrigation, and to develop cultivars adapted to the semi-saline conditions which tend to prevail. Following are some observations noted by Dr. Schery, which constitute a follow-up on previous reports (such as Vol. 24, No. 4 of Harvests).

Dichondra still enjoys a fair market in the area, and selections made at Santa Ana are much planted for seed. Most seed is now produced near Sacramento (Lodi and Clarksburg). Although initial plantings in this more northerly region involved the four-clone UCR-1 selections, continuous harvesting of the same planting probably reflects considerable genetic drift towards locally adapted ecotypes. Seed can remain on the ground for months or, even years without sprouting until scarified, and is typically gathered along with much dust and debris by huge sweepers, for screening out of the seed. Dormancy is mechanical and can be ended by scarification. Scarification is typically accomplished by tumbling the seed among granite rocks, or by otherwise abrading the seed coat. Dichondra in the Los Angeles area is subject to many ailments, including nematode attack: it is more trouble to grow than is bermudagrass, and often scalps in mowing. Introductions from North Carolina made in 1968 show excellent nematode resistance. Spaulding believes that most dichondra seed is produced from cleistogamous flowers (at least it is self-pollinating), and crossing has been very tedious and difficult even under controlled laboratory conditions.

Zoysia is another ground cover somewhat used in the Los Angeles area, many widely varying cultivars of which have been selected at Santa Ana. In general four generations of inbreeding provide "pure line" clones, which when crossed have produced some highly desirable progeny. Especially outstanding is the excellent winter color of some of the new strains, which seems to scarcely undergo winter dormancy (the lowest temperatures in Santa Ana are barely below freezing). Spaulding does not find zoysia difficult to maintain. Thatch is not particularly a problem. In his experience zoysia can go for a number of years without thatch becoming troublesome (although the height of the sod does build up), after which it can be stripped off with a sod lifter to regenerate anew from rhizomes and roots in the soil. Many lawns have not needed such renovation for 8 years. He advocates mowing at about 1/2 inch, fertilizing with about 1/2 pound N per month through autumn, winter and spring (but withholding fertilization in summer).

Other warm-season turfgrasses are being examined for their ability to survive under a water regimen less than evapotranspiration (i.e. what percentage of evapotranspiration is essential).

Cultivars of Paspalum vaginatum obtained from Australia are being scrutinized. Densely grown they appear very much like an improved bermudagrass, but have a faded-green winter color. Perhaps selections could be developed with better color.

St. augustinegrass is enjoying an upsurge of popularity, partially because of interest from people moving in from Texas and other locations where st. augustine was familiar. St. augustine did not have many problems formerly, but recently chinchbug has become quite serious.

Surprisingly, even more interest seems to center on cool-season grasses in southern California than on warm-season ones, even though they may not be long-lasting. This is partly because of aggressive sod and nursery industries supplying contractors for the ever-expanding housing market. Most sod producers coin a brand name for their sod, and do not identify to the customer the individual cultivars included.

Most sod contains one or more Kentucky bluegrasses, with a sprinkling of perennial ryegrasses, utilizing a soil netting to hasten lifting. Experience seems to indicate that including perennial ryegrass with bluegrass helps prevent *Fusarium roseum* attack. Sod growers are said to use about 80% bluegrass, 20% ryegrass, and have no problem with this combination even in the summer season. The bluegrass is sown first, and about 6-8 weeks later the ryegrass scattered on top where it germinates well under controlled irrigation. Spaulding estimates that of the new lawns, about half are seeded, half sodded, with most of the planting done by contractors.

At Santa Ana 56 bluegrass cultivars, 37 perennial ryegrasses and 37 fine fescues are under observation. In general, except where fertilization is one of the variables, they receive about 4 pounds of nitrogen (ammonium sulfate) annually, 1/2 pound at a time.

Spaulding lists among the bluegrass standouts Titelist (International Seeds), IS-28, Scenic (selected out of Merion), Enmundi, Majestic, Vanessa, Bristol, Merit, Adelphi, Parade, and Rugby. In the old plantings previously reported on Spaulding lists IS-28, Parade, Adelphi, Rugby, Majestic, Enmundi, and Scenic as the best-enduring and most attractive. In all of these plots *Oxalis* has invaded strongly and seems to be a year-around weed in this part of California.

Regal perennial ryegrass seems to have shown about the best durability, dark color being outstanding in Carvelle, Citation and Regal. In overall ratings Spaulding lists Pennfine, Derby, Diplomat, Manhattan and Clipper as among the best of the perennial ryegrasses.

Adonis has been a good fine fescue. Tall fescues show poor competitiveness against bluegrass when used in combinations with bluegrass, but Santa Ana has made a number of selections through the years, including a fine-textured type (which doesn't yield seed well when grown in Oregon, but seems a good seed yielder in California). Semi-rhizomatous strains have been developed, derived from collections from Mcocco and Turkey.

As to fertilization, no advantage has been found from increasing 4 pounds of nitrogen (from ammonium sulfate) annually to 6 pounds for ryegrass (applied one half pound at a time). But less than four pounds of N does not provide quite such good quality as the four pound level.

GROWTH RATES OF SOUTHERN GRASSES

Busey and Meyers, Florida, report in the September-October Agronomy Journal, on "Growth Rates of Turfgrasses Propagated Vegetatively". Of the grasses tested, centipede was considerably the slowest, bermudagrass the fastest, with zoysia and st. augustine about half way between, bahiagrass not a whole lot faster than centipede.

AUTUMN RASEN

The September/October issue of Rasen (Turf/Gazon), No. 3, Vol. 10, was received from Germany in mid-November. One paper was in English, but the German presentations carry both English and French summaries.

Hemmersbach, Bonn, discussed identification of seedling turfgrasses, for which he found leaf area to be a consistent feature.

Adams and Saxon, Aberystwyth, Wales, reviewed thatch at length, mentioning much work reported in the United States. Neither fertilization or mowing made a great deal of difference, and no additives have been found which will speed thatch decomposition. Thus physical removal, and reduction by topdressing, remains standard treatment. A formula is offered for determining the amount of topdressing needed annually.

Von Boberfeld et al note the influence of fertilization practices on stand change. A mixture of 40% Chewings, 20% creeping red fescue, and 40% Kentucky bluegrass trended in the direction of the fescue as soil conditions became more acid (also the turf was thinner, with more thatch), whereas heavy nitrogen fertilization favored bluegrass (whether of mineral or "slow-release" types).

PERENNIAL RYEGRASSES REVIEWED

The November issue of Park Maintenance magazine carried Dr. Fred Ledebor's article, "Try New Perennial Ryegrasses". This affords straightforward publicity for the cultivars. Mentioned by name were Manhattan, Pennfine, Citation, Derby, Diplomat, NK-200, and Yorktown II. Dr. Ledebor recommends against using "hay types" (like Linn and Common) for turf, although "pasture types" (such as Norlea, Game and Sprinter) have some utility, though not the quality of the "turf-type" ryegrasses mentioned. He advocates inclusion of Kentucky bluegrass with perennial ryegrass to broaden adaptation, and cautions against over-abundance of the ryegrass (proportionment depending upon when seeding is done, mixture composition and rate utilized). He notes that, "Ryegrasses will persist fairly well under low fertilization rates of 1-2 pounds of nitrogen - - -".

FERTILITY LOSS IN CLIPPINGS

The December issue of Northwest Turfgrass Topics summarizes a presentation by Wilkinson, of ChemLawn, given to the 1977 ASA meetings in Los Angeles. It is a convenient reminder of how much fertilizer wastage can occur when clippings are removed. Wilkinson cites up to 47% of applied nitrogen to be removed in a single mowing, although the exact amount will vary with the type of fertilizer application (liquid, solid, etc.), whether watering is practiced or not, and the delay until mowing is undertaken. Wilkinson advises that clippings should be returned at least for two mowings after fertilization in order to avoid large losses of nitrogen.

STRENGTH OF BERMUDAGRASS SOD

Mitchell and Dickens, Alabama, report in the Nov.-Dec. Agronomy Journal on the strength of certain bermudagrass sods treated in differing ways. Tifway was up to 50% stronger than Tifgreen in all tests. Mowing height made little difference on sod strength, but moderate fertilization provided greater strength than heavy fertilization, and a longer interval between fertilizations was more favorable than a shorter one (two weeks).

SULFUR AND BENTGRASS

Goss et al, Washington (Puyallup), report in the Nov-Dec., Agronomy Journal on the "Uptake of Sulfur by Bentgrass Putting Green Turf". Some fairly complicated interactions occur, involving phosphorus and potassium as well as nitrogen and sulfur, but in general it was felt that 0.3% sulfur in tissue tests is necessary for optimum bentgrass performance. With high nitrogen fertilization and little or no sulfur addition this was seldom obtained, especially with cool soils in spring. In general heavy nitrogen fertilization resulted in significantly lower sulfur concentrations, but addition of 56 kg/ha was sufficient to supply the necessary sulfur. In other studies higher levels of sulfur have proven to help prevent disease such as Fusarium.

FERTILIZATION INFLUENCES ANNUAL BLUEGRASS POPULATION

Engel and Bussey report in the September-October Golf Course Management on research at Rutgers in which golf-green bentgrasses overseeded with annual bluegrass received urea, UF, IBDU and Milorganite fertilization under timing variables. Urea, especially when applied late (December, as a "dormant" feeding, rather than in Sept.-Oct.-Nov.), was most effective in reducing the Poa annua population. Apparently a soluble nitrogen source, applied beyond the normal germination time of the Poa annua, shifts populations in favor of the bentgrass. With urea fertilization about 5 times as much Poa annua resulted from the early feedings as from December only; 3 to 7 times as much Poa annua occurred with "slow-release" fertilization as with urea.

VOLATILITY OF DICAMBA

Research by Behrens and Lueschen, Minnesota, documents instances of vapor (and perhaps drift) movement of dicamba in field applications. Various salts of dicamba were used in the test, and all exhibited some volatility. Since dicamba is becoming more or less a standard inclusion in lawn herbicides, this evidence is well to keep in mind (although generally rates are so light in lawn treatments as to minimize potential damage). The research is reported in the September issue of Weed Science.

PERENNIAL RYEGRASS IN CALIFORNIA

Mark Mahady, in consultation with southern California turfgrass researchers, reports in the October issue of Western Landscaping News on "New Findings" concerning perennial ryegrass. That perennial ryegrass can be cut as low as 3/4 inches and still maintain an attractive, satisfactory turf in southern California, given the proper care, is primarily stressed. In ratings reported, Derby and Pennfine led with the highest scores, followed by Manhattan and others. Optimum fertilization was at the four pound nitrogen/M rate annually, but the author advised not to "over-fertilize".

TREATING PETROLEUM SPILLS ON TURFGRASS

John and Beard, Texas, report in the Nov.-Dec. Agronomy Journal on experiments designed to correct damage as might occur from gasoline or petroleum spilling from equipment. Bermudagrass was the test species. Detergents enhanced grass recovery after oil or brake fluid damage, but no treatments were particularly effective for gasoline or grease. After several weeks the bermudagrass recovered from gasoline damage in any event, but recovery from grease spills was slow and difficult, corrective measures not very helpful.