

BETTER LAWN - - HARVESTS

PUBLISHED PERIODICALLY BY THE
BETTER LAWN & TURF INSTITUTE

RT. 4, MARYSVILLE, OHIO
PHONE: (513) 642-1777

VOLUME 21, NUMBER 1

APRIL, 1974

INDEX

GENERAL: PAGES 1 - 9

TECHNICAL: PAGES 10 - 14

HIGHLIGHTS FOR THE QUARTER

Institute staff activities during the quarter, in addition to the routine handling of correspondence, telephone inquiries and operational details, included the following:

Personal presentations by Director Schery to the Iowa Golf Course Superintendents' annual meeting ["Modern Methods of Care for the New Turfgrass Varieties"]; and the Garden Club Symposium held in Madison, Wisconsin, ["Typing the New Lawn Varieties to Tailored Maintenance" and "The Past-Present-Future of Turfgrass and Its Care"].

The Institute press kit for spring, and that prepared as a joint effort with other associations (Lawn and Gardens Supplement), appeared, stories from which are being picked up nationally at this time.

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

Am. Garden Guild, Doubleday
ASA publications
Club Management
Edison Garden News
Flower and Garden
Garden Writers Bulletin
The Gardener
House & Garden
Inst. on Maintenance Proceedings
International Turfgrass Proceedings
Lawn and Garden Supplement
"News & Views" - Am. Hort. Soc.
Outdoor Power Equipment
Park Maintenance
Plant Science, Freeman, 2nd Ed.
Resort Management
Seed Trade News
Seed Trade News
Seed World
Weeds Trees & Turf

10,000 Garden Questions (lawn section of book)
The Institute of Ecology
Reprints of "Lawngrass Fallout" distributed
Various lawn stories
"You Can Patch a Lawn Profitably in Spring"
"Lawn Care, Month by Month"
"The Future of Your Lawn-Tailored Turf Care"
Garden Guide: "The Lawngrass Explosion"
"How New Varieties Fit Lawn Maintenance"
"Quality Lawnseed on the American Market"
Various lawn stories
Explanation of rising seed costs
"What Are You Going to Advise for the Lawn?"
"Tailored Turf Maintenance"
Teaching text, chapter on lawns & ornamentals
"Spring Lawn Preparation"
"Cultivation of a Good Lawn Aids, Does Not Harm"
"Clip Bluegrass Early"
Various lawn stories
Participation in "Turf Contaminants"

The Marysville staff very much appreciates the efforts of our industrious Secretary-Treasurer, Robert Russell, who in addition to ably overseeing financial affairs gets tax matters settled at this time of the year.

HIGHLIGHTS (Continued)

Doyle Jacklin, Variety Review Board chairman, and his committee have been most diligent. Several new cultivars are being considered for acceptance by the VRB, with their processing underway. Plantings have been made on the Institute grounds.

VARIETY REVIEW BOARD ACTIVE

With receipt of the "advance minimum," KOKET fine fescue became formally accepted as a VRB cultivar. GLADE Kentucky bluegrass is in the final stages of acceptance. Application for CHERI Kentucky bluegrass (GOLF in Europe) has been received, and is being processed. Inquiry was received some months ago for CITATION perennial ryegrass, and FORTRESS spreading fescue. At least two other bluegrasses, as yet unnamed on the American market, are possible candidates for VRB listing in the future.

The Marysville office would welcome a small amount of seed (50 grams or so) of any worthwhile new variety for which seed production and marketing is contemplated in the future. If and when such varieties apply to the Variety Review Board, the Institute then has display plantings, and the Marysville staff first-hand experience with the cultivar.

Application forms for the Variety Review Board can be had from the Marysville office, or directly from chairman Doyle Jacklin (Jacklin Seed Company, E. 8803 Sprague Avenue, Spokane, WA 99206). One copy with supporting documentation suffices, since this can be photocopied for distribution to members of the Board.

The VRB reports its recommendations to the full Board of Trustees at least annually, and will be finalizing conclusions during the next month or two making ready for the annual meeting of the Institute, to be held in Minneapolis in conjunction with the ASTA convention in late June.

"BLUEGRASS BEAUTY" FILM

Some years ago the Institute produced, and circulated widely (through Modern), the 14-minute presentation "Bluegrass Beauty." Multiple copies were kept in the Modern inventory, to service the numerous TV outlets (something in the neighborhood of 17 million certified audience used the film). As the film grew older, and Institute income for such projects diminished, the film was retired. Numerous copies are still in storage in the Marysville office "attic."

This color-sound movie was pieced together from footage taken in the heart of the "Inner Bluegrass" in Kentucky, as well as in the "western district" near Kansas City. The final portion is a quick go-round on lawn care, taken in Marysville. The film, while useful as a public service feature, was not as expertly directed as it might have been, and tends to cover too much territory in the allowable time. Yet, there are some scenic episodes, even though the seed gathering (natural bluegrass) has now been superceded by agricultural growing of select varieties in the Far West.

There seems no point in keeping these films in storage any longer. Their original value was in the neighborhood of \$100 each, and similar film produced today would be much more costly. If any member would like a copy, we would be happy to ship one in its own mailing carton upon request. This, of course, will have to be without professional scrutiny as to the quality of the print (all of them used). How much splicing has been done in their maintenance is conjectural. (Modern provided new "head" and "tails" as these became worn, and inspected each reel on return.) Let the Marysville office know if you would like one of these prints.

PRESS KITS MAILED

The Institute's spring Press Kits were mailed the week of February 11, to almost 1,000 newspaper editors, garden writers and other interested participants. Widespread pick-up of the stories has been noted in incoming correspondence. The press kit contained 39 titles and four reprints. Variety Review Board cultivars were featured.

SPRING SUPPLEMENT MAILED

The "Lawns and Gardens" Supplement for smaller newspapers, produced in conjunction with the American Association of Nurserymen, The Fertilizer Institute, National Agricultural Chemicals Association, and the National Swimming Pool Institute, was mailed nationally to thousands of newspapers by editor Pflaum in February. Institute participation was partly financed by a grant from the Lawn and Turfgrass Division of American Seed Trade Association.

Institute members were mailed a copy of the Supplement, and probably noticed the generous use of Institute materials (26 stories, 7 photographs). Scattered through the texts were occasional references to new varieties. Editor Pflaum altered some of the original titles to fit space, but misleading references were held to a minimum.

We are pleased with the quality of production in this year's release, and look forward to widespread pick-up from it of stories and photos concerning lawns throughout the spring season.

REPORTING "INVOICES" MAILED

Secretary-Treasurer Russell mailed the customary quarterly reporting "invoices" to all sponsoring members during March. We appreciate very much his business-like procedures, now fully "on stream," and the fine voluntary response from sponsors whose volume has reached a sufficient level this early in the season to warrant contributions beyond the declared minimum.

TELEVISION APPEARANCE

The "Morning Exchange", a very successful Cleveland television presentation, has invited Dr. Schery to review lawns and lawn problems for the spring, on April 2. This is a repeat appearance, following up on an autumn presentation in which the studio's switchboards were jammed with listener inquiries within seconds of the beginning of the program.

WEEDS TREES & TURF STORY

The March issue of Weeds Trees & Turf magazine carried the story "Turf Contaminants" credited to Dale E. Kern, Seed Technology. The Institute was involved in assembling some of the information, through contacts with prominent weed researchers at major universities. It is given credit in the text, viz. "The Lawn Institute suggested ...". Unfortunately, proofreading was sloppy, with misspellings being fairly frequent, especially in one of the photo captions.

The thrust of the story is that fine turf cannot result from poor quality seed. The experts have never really agreed upon what are the most serious "weeds" in lawns; crop or other persistent inclusions are often more a problem than are "legal" weeds. Having specialized in lawnseed analyses for many years, Seed Technology has accumulated a vast inventory of records as to what off-type seeds occur with any great frequency in commercial lots.

WEEDS TREES & TURF STORY (Continued)

That the same "weeds" are not everywhere troublesome is proved by the responses from university experts around the country. In 1973, for example, an unusually wet year, Poa trivialis and Alopecurus (foxtail) became extremely serious in Wisconsin, especially in the sod fields. And what is troublesome in New England is not necessarily so in Kansas. Moreover, some of the experts feel that weeds are not too much of a problem because of modern means for controlling them, while others regard even the easily controlled species as nuisances to be avoided at all costs.

Seed Technology has grouped weeds into three classes, -- Class A, Controllable; Class B, Less Desirable; and Class C, Very Undesirable. The last named group would include many of the perennial haygrass crop species, as well as other monocots such as nutsedge and even the broadleaf, speedwell (Veronica). The views expressed to the Institute by the professionals are summarized according to region.

IN NEWS & VIEWS

Word has been received from Albert Mark, "News & Views" editor for the American Horticultural Society newsletter, that the Institute's observations on a previous "News & Views" item ("Grass Seed Prices Going Up") will appear shortly. Blame for increasing costs had been laid to a professed shortage of perennial ryegrass. Acquainting the Society's membership with the various reasons for rising seed prices seems very much in order at this time, noting that quality and improved varieties so much in demand today are still had at quite a bargain price, all things considered.

IN FLOWER AND GARDEN

Flower and Garden magazine, April issue, carried the Institute story, "You Can Patch a Lawn Profitably in Spring." The story gives emphasis to the many choices of new cultivars for repairing lawns, and names varieties of bentgrass, fescue and perennial ryegrass. Perennial ryegrasses are suggested for establishing cover quickly. Three illustrations show the sowing and early sprouting of a ryegrass planting.

SEED WORLD SPECIAL

Seed World magazine will again devote its April issue to turfgrass, and we have given editor Stelle permission to utilize what he wishes from the Institute press kit for this always impressive undertaking. A photo has been supplied for the issue's cover.

HOUSE & GARDEN "GARDEN GUIDE"

The 1974 House & Garden's "Garden Guide" was published in March, containing the Institute story THE LAWN GRASS EXPLOSION by Dr. Schery. Fourteen grasses were pictured, and all of those approved by the Variety Review Board listed as a boxed insert, this coded to the names and addresses of proprietary firms at the end of the story. It adds up to an impressive featuring of proprietary varieties and their sponsors in a prestigious magazine.

The story opens, "A bewildering wealth of new lawn-grass varieties -- confronts the lawnmaker today. New proprietary releases are commonplace for all of the top-flight, cool-climate species -- especially the Kentucky bluegrasses, but also fine fescues, bentgrasses and of late the turf-type ryegrasses." Background is provided on the evolution of the new cultivars, including a section on "Caring for the New Lawn Cultivars." The story winds up with instructions on seeding, fertilization ("ureaform will neither burn nor overstimulate grass ---"), mowing and pest control. The story states, "---those cultivars having found acceptance with the VRB of the Lawn Institute as having particular merit on the current lawn scene will serve as our main examples of modern lawngrass cultivars ---."

PARK MAINTENANCE STORY APPEARS

TAILORED TURF MAINTENANCE, with full author and Institute credit, appeared in the February issue of Park Maintenance magazine. This was the outgrowth of Dr. Schery's participation in the Memphis "Institute" on parks and grounds maintenance, where he spoke on "How New Varieties Fit Lawn Maintenance."

This follow-up cites the usefulness of tailored materials in the care of fine turf. Nitroform fertilization, and Trimec weed control, are used as examples of the kinds of products tailored to modern turfgrass cultivars, and which are especially useful "where labor is in short supply, expensive, or lacking full supervision." This would apply to most homeowners.

The story points out that "all of 'kitchen chemistry' is built into the product" when a carefully formulated herbicide or fertilizer of the sorts named are used. Because the proper combination of components has been determined by research, the product is effective at unexpectedly light rates. The user need not have great technical knowledge, and need only follow simple directions accompanying the product.

In order to save on costs, a general reprinting and distribution of this item is not planned. However, should any member have particular interest in it, the Marysville office will be happy to send along a copy upon request.

BOUQUETS FROM FLOWER AND GARDEN

Under the heading "A Special Bouquet," Flower and Garden magazine, April issue, has this to say about Manhattan perennial ryegrass (based upon experience in a Kansas City garden): "... [Congratulations] to developers of the new 'Manhattan' perennial ryegrass. A 35-foot strip of this, seeded in September, came up and thickened fast before freezeup. It remained green through winter and by April looked especially fresh and green, with fine texture. For good appearance, seed it with a mechanical spreader that distributes evenly. Though it superficially resembles bluegrass, 'Manhattan' establishes much faster."

IN SEED TRADE NEWS

The press kit story, titled by the paper CULTIVATION OF A GOOD LAWN AIDS, DOES NOT HARM, ENVIRONMENT, appeared in the February 27 issue of the Seed Trade News. The story plugs the usefulness of lawns to humankind for the many benefits grass can bestow.

INQUIRY BLITZ

Hordes of self-addressed, stamped envelopes were received from the San Francisco area of California in mid-March, as a result of the appearance in the Sunday, March 10 San Francisco Chronicle gardening section, of the press kit offer for a free up-to-date list of lawn cultivars. Reprints enumerating Variety Review Board cultivars were sent, and other information as well in cases of specific inquiry (e.g. how to handle a bentgrass lawn, etc.).

It is gratifying to have a major newspaper include this offer on its gardening pages. Such requests are handled at little cost to the Institute (because of the stamped envelope requirement), and the selectivity guarantees serious interest (by anyone who would go to this trouble and expense). A similar flurry of interest came from Pennsylvania earlier in March, and a scattering of inquiries from other states.

INSTITUTE'S STORIES EFFECTIVELY USED

We were pleased to receive from editor George Jecmen, Edison Garden Club News (circulated in the Chicago area), sample copies of the September-October and November-December issues, both of which used Institute stories. Mr. Jecmen's covering letter adds, ". . . I am certain that you are well on the way to preparing another quality batch of releases on grasses and lawns . . . I am looking forward to another newsy year . . . thank you for your fine cooperation."

The early autumn issue carried FRONT DOOR ECOLOGY and OF WATERING AND LAWN GRASS ROOTING. The key to producing fine lawns from good varieties, and gradual-release fertilizer, is stressed. The prevalence of low-growing varieties among new cultivars is mentioned, "Thus bluegrass varieties like Baron, Fylking and Pennstar may be able to hold up when interseeded with a normally low-clipped grass like Highland bent."

The late autumn issue used NEW LAWN MAKING, LAWNSEED TO COST MORE, PEDIGREED BLUE-GRASSES MAKE THEIR MARK, and UREA FORM PROVIDES FERTILITY RESERVE, all fully credited to the Institute. That lawnseed is still a bargain ("A penny's worth still purchases more than 5,000 seeds in a typical lawnseed mixture, not a bad bargain") is emphasized and the reasons for increasing costs are detailed. The Rutgers breeding program has mention ("Adelphi, Bonnieblue, Galaxy and Majestic are in this elite group"). As to ureaform, "One of the exciting features of lawn fertilizer containing gradual-release ureaform is the way reserves build up in the soil . . . Nitroform UF becomes 65 percent available the first year, 25 percent the second, with 10 percent carried over into the third year."

Issues of the "Garden News" run about 20 pages, and are attractively photo-printed. The editing is impeccable, invariably free of typographical mistakes and giving full credit for the stories. Mr. Jecmen is to be complimented upon the quality of his efforts.

PROCEEDINGS APPEAR

A Proceedings consisting of papers presented at the Park Maintenance "Institute" in Memphis last November, has now been issued by Park Maintenance, P. O. Box 409, Appleton, Wisconsin. Among the presentations was HOW NEW VARIETIES FIT LAWN MAINTENANCE by Dr. Schery, for the Institute. This paper is not being reprinted and circulated to the membership, although if anyone would like a copy, we would be pleased to forward one of the original write-up. Its purposes are satisfied by being included in the Proceedings, which goes to professionals in the grounds maintenance field.

The paper spoke of the gradual evolution of modern cultivars starting with Merion, currently climaxing in a wide array of fine varieties. It was pointed out, however, that no matter how good a pedigree, turfgrass must be adequately tended in order to achieve satisfactory performance. Fortunately, new products, such as the slow-release nitrogen fertilizers, makes this job easier and less needful of skilled technical talent.

The paper goes on to point out the various assets new cultivars bring to the users, -- notably tolerance to disease, better durability, greater vigor, superior seed -- characteristics which tend to reinforce one another. Higher seed costs are inescapable, because varieties chosen for good performance in the lawn will not be ones throwing an abundance or wiry seedheads (which correlates with seed yield), and because costs (including pollution control) are rising all along the line as with everything else in the economy. Yet seed is still a great bargain, considering its abundance by the pound, and in comparison with other inputs (primarily labor) needed to establish and maintain turf.

PLANT SCIENCE

The 2nd edition of PLANT SCIENCE, authored by Dr. Schery and co-authors Janick, Woods and Ruttan, was released in March. This is an introductory college text for world crop

PLANT SCIENCE (Continued)

study. The turfgrass industry is discussed as part of chapter 23, as is the seed industry, with two photos credited to the Institute and another to the Highland Bentgrass Commission ("Combining Highland bentgrass in Oregon for lawnseed").

AMERICAN GARDEN GUILD BOOK

Ruth Buchan, editor of the American Garden Guild Book Club, informs us that 10,000 Garden Questions Answered has now appeared. This is the volume for which Dr. Schery redid the lengthy section on lawns. Ms. Buchan writes, ". . . we hope to make corrections as we reprint this edition, so that it will never become old . . . thank you very much for your part in this project. We hope you will be proud to have your name connected with it."

TRANSIT PLANTING MANUAL

Perhaps of interest to members is Transit Planting: A Manual, prepared for the department of transportation by the American Horticultural Society. Cost of the project, totaling nearly \$100,000, was partially underwritten by a grant from the Urban Mass Transportation Administration. Over one hundred authorities are credited in the "acknowledgments," and the introduction explains that the full force of the AHS computer was brought into play for winnowing and narrowing down the selections. The general impression is that seldom have so many worked so mightily to create a "sophisticated" booklet (66 pages), that a good garden writer could have accomplished largely by himself.

Nevertheless, in spite of pretentious illustrations (drawings, more ornamental than instructive), the book is a handy source for suggestions of plants considered durable in the specific climatic zones. A map of climatic zones is included. Tabular itemization of "trees", "shrubs", and "ground covers" notes something about their size, growth rate, form, special features and so on. The species are those that might endure stringent urban conditions. The usual planting instructions are epitomized. Where to procure the plants named might be a problem: certainly not many are found in the average garden center. Yet the book should prove handy for the people (usually engineers rather than horticulturists) charged with designing urban landscaped areas.

Unfortunately, as is usual with the American Horticultural Society, turfgrasses are overlooked, -- seemingly not worthy "horticulture" subjects. Admittedly turf would play a secondary role in the examples used in this book (mostly bus stops and terminals), but one might presume that ease of planting and care of grass would make it more economical than some of the container plantings and ground covers advocated.

LIAISON REPRESENTATIVE

Dr. R. R. Davis, Chairman of the Crop Science Society of America, asked Dr. Schery to serve as liaison representative with the National Institute of Ecology, chaired by Dr. Hasler of the University of Wisconsin. TIE is a confederation of many prestigious universities and organizations of the caliber of the National Academy of Science. Dr. Schery sent his report on TIE to the offices of the American Society of Agronomy and received this acknowledgment:

"I commend you very highly for the excellent manner in which you have responded to your appointment as liaison representative with the Institute of Ecology . . . your approach has been positive and responsible . . . thank you kindly for the initiative and industry you have shown . . ."

-- Matthias Stelly
Executive Vice President

GARDEN CENTER SYMPOSIUM PRESENTATION

Dr. Schery was a featured speaker on January 22, Madison, Wisconsin, before the Garden Center Symposium (garden center owners in the northern Midwest). In the morning Dr. Schery's topic was "Tying the New Lawn Varieties to Tailored Maintenance." Background was given on current varieties, and reasons for higher costs and shortages discussed. The response of the new varieties to tailored maintenance (such as gradual-release fertilization) was detailed. The presentation wound up with a slide review of cultivars and seed production.

In the afternoon, Dr. Schery's assigned subject was "The Past-Present-Future of Turfgrass and Its Care." This presentation permitted a more thorough development of the theme begun in the morning, with some speculation as to the directions in which turfgrass research is moving and lawn care products that can be anticipated. The reprints "Spring Lawn Preparation," Resort Management; "Lawngrass Fallout: A Boon to Clubs," Club Management; and "The Lawnseed Industry," Crops & Soils were distributed.

Other speakers on the program were concerned with greenhouse and merchandising aspects of the garden center business; they reviewed insurance, power equipment and its servicing, the weaknesses and strengths of the industry, bulbs, small package shelf items, Christmas trees, terrariums, and so on. Attendees showed a lively interest in lawnseed and lawn supplies, and this was a good opportunity to brief an influential group.

IOWA GOLF COURSE SUPERINTENDENTS ASSOCIATION ANNUAL MEETING

Dr. Schery represented the Institute at the 40th Annual Turfgrass Conference of the Iowa Golf Course Superintendents Association, Waterloo, March 11-13, speaking on "Modern Methods of Care for the New Turfgrass Varieties." In addition to Iowa State University and Iowa golf course personnel, speakers included Dr. Daniel from Purdue; Stan Frederiksen from Mallinckrodt Chemical, St. Louis; Dr. James Watson of Toro; Clifford Wagoner from California (representing the national association); and Greens Section people from Illinois and Nebraska.

Dr. Schery reviewed progress from the unsophisticated days when summer brownness was taken for granted on unirrigated fairways, to the present demand for consistently high quality, low-mowed turf. Merion sparked the revolution, now abetted by a series of outstanding cultivars developed in Europe, and even more recently those newly bred domestically. The superintendent can count upon low, dense, good-looking, disease-tolerant fairway varieties today.

But the new varieties are not by themselves the cure-all; they must be given reasonable care. Needs of individual varieties were discussed, and their ratings mentioned. Grass-tending equipment has made great strides, even to the point of our perhaps becoming over-mechanized (in an era of shortages). Seed is still a great bargain, although economic influences have forced a price rise. The quality of the modern product is generally good. Gradual-release fertilizers such as Nitroform have been a boon, usable with safety even by unskilled labor that cannot be supervised. Tailored pesticides make it simple to control weeds, although we still know too little about the ecology of turf diseases (why the fungi get out of balance).

Considerable questioning from the floor followed Dr. Schery's presentation, and the Institute reprints, "Perspectives on Golf Green Fertilization," "Lawn Grass Fallout: A Boon to Clubs," and "Spring Lawn Preparation" were distributed. All in all the conference was an impressive one for a state association. No "proceedings" for the conference is planned.

ACADEMIC INTEREST IN TURFGRASS EXPANDS

We were pleased to have an inquiry from the State University College of New York at Brockport, concerning establishment of a course in turf management within the Department of Recreation and Parks curriculum. Dr. Gianfagna, Professor for the program, writes, ". . . I could use some help . . . our library is void of references . . . I hope to expose our students to various lawn practices . . . could you possibly send me some suggestions (films, texts, periodicals, etc.) . . ." In addition to advancing suggestions the Institute sent literature for class use, with the offer to supply additional reprints as they prove useful.

PARK DEPARTMENT REQUEST

Stan Stenek, Superintendent of Parks and Recreation, Gary, Indiana, requested literature of the Institute for library purposes. Sample reprints were sent, with the offer of additional titles should such materials appear useful for the department library.

COLLEGE INSTRUCTIONAL REQUEST

Request has been received from Oakwood College, Huntsville, Alabama, for reprints and information that might be instructional for the greenskeeping profession. A series of Institute items has been sent Charles E. White, Director.

INSTITUTE LITERATURE REQUESTED

The Ohio State University College of Agriculture has now created an "Agricultural Technical Institute," offering a two-year program in various subjects that include landscaping, nursery work, turf management, and similar technology. The Ohio Institute has requested from the Lawn Institute any pamphlets or other materials with which to help build the library. An assortment of reprints have been sent, and reference made to other source material.

SPECIAL ON LAWNS

Chuck Warren, Douglas County Gazette, telephoned the Institute asking for materials to appear in a special lawn and garden issue of the Douglas County Gazette (Omaha, Nebraska area). The press kit, an offer for custom items, and eight photographs were sent Mr. Warren for use in his special edition, "put to bed" in mid-March.

CRITICIZE ARTIFICIAL TURF

Western Landscaping News, in its December issue, reports on a meeting held by the National Football League players arguing for abolition of artificial turf. San Francisco quarterback, Brodie, claimed that artificial turf is changing football, and called for a halt to its installation "before somebody gets killed," according to a Los Angeles report. Brodie also complained that when playing in Miami's Orange Bowl, the temperatures reached 95° in the stands and 120° on the field. Several San Francisco players suffered heat prostration. Many other professional athletes joined in the criticism.

AN APPRECIATION

"Thank you most kindly for . . . the fine turf reprints which we will use as reference. I was told that this is the kind of help one could expect . . . You were, indeed, quite thorough and encouraging."

--- Alfred Gianfagna
State University College at Brockport

TECHNICAL SECTION

RUTGERS TURFGRASS CONFERENCE

The level-headed turfgrass leadership expected of Rutgers University is reflected in the Proceedings of the January turfgrass conference held at New Brunswick, New Jersey. Proceedings run 73 pages, and are published as "offset Series S & C, Volume 5."

Schmit, Funk, and Duell review fine fescues. Summer difficulties with this species are noted. They are emphatic about the distinctiveness of three types -- Chewings (subsp. commutata), including cultivars like Jamestown and Highlight; creeping (subsp. tricophylla), represented by cultivars such as Dawson and Golfrood; and spreading (subsp. rubra), represented by Ruby and Fortress. A blend of six adapted spreading fescues is being suggested for roadside seeding in New Jersey. The subspecies show differences in chromosome number and time of flowering.

Engel discusses establishment of turf from seed, the advantages of topsoil and the need for fertilizer. Flannery further analyzes the fertilizer situation, predicting higher prices and shortages, suggesting that established lawns should be able to get by with less fertilizer than is customarily advocated.

Several papers dealt with turfgrass diseases, and Jack Martin, golf superintendent, indicated great difficulty in controlling dollarspot in 1973, with races on his course having developed resistance to the systemic fungicide, benlate. Dr. Cole, Penn State, notes that the weather of 1973 was such that *Helminthosporium*, normally not seen until spring, began as early as February. He advocated withholding nitrogen, and use of fungicides such as Dyrene, Daconil, maneb and Acti-dione. *Fusarium* blight was intensified by the wet, warm weather in summer; systemic fungicides and minimum nitrogen are suggested for control. *Pythium* was also encouraged by 1973 weather, for which Koban, Tersan SP, and Dexon are specific controls. Cole feels that disease control is very complex and increasingly a problem because of the lush, irrigated turfs called for on golf courses nowadays (formerly disease would have passed unrecognized, as "summer drought", and specific fungicide treatments not be needed).

Halisky advocates alternating systemic fungicides with contact sprays, to overcome the difficulty of certain diseases having developed resistance to the systemic. He recommends benomyl in autumn applications for control of stripe smut.

Dickson and Funk discuss varietal performance with major lawngrass species. Quality ratings are given for 5 years (1969-1973) with bluegrasses under the regional variety test, in which P-23 rated most highly in 1973 (although certain other years other varieties may have rated higher). Nugget was top rating early in the test, but has been down the list the last two years; yet others, such as Sodco, have held their standing. Leaf spot and stripe smut incidence are given for each variety. Ratings for each variety are also provided on a monthly basis for 1973 (commercial varieties with an above-average rating of 6 or better for the year include, in descending order, Sodco, Majestic, A-20, Bonnieblue, Fylking, and Pennstar). Atlanta and Halifax fescues had highest ratings, but Jamestown and Highlight were close behind, the leading commercial varieties (considerably superior to Pennlawn). Performance of mixtures or combinations was also judged beginning with a 1972 planting. Cultivars often occupy different relative positions in diverse plantings of varying age.

Engel and Bussey review crabgrass control, and find a certain amount of inconsistency through the years; almost all products have a "bad" year now and then, especially characteristic of siduron. RP-17623 gave the best performance for the six years. In general dry (granular) pre-emergence herbicides did a better job than those applied in solution. In some years early application was better, in other years late application.

RUTGERS TURFGRASS CONFERENCE (Continued)

McVeigh, Dickson, Halisky, and Funk review perennial ryegrass performance. Experimental selections (particularly the Yorktown series, Turfseed B and Citation) gave very encouraging turf quality performance. A brown blight (Helminthosporium siccans) and Rhizoctonia brown patch diseases were both troublesome. Among the commercially available ryegrasses, Manhattan had the highest rating for the period September, 1972 thru December, 1973, followed closely by Pennfine.

Dickson, Engel, and Funk reported upon investigations in which soil treatment with tricalcium arsenate (a common crabgrass preventive measure) was detrimental to some of the new Kentucky bluegrass cultivars. The study has continued for only one year, but some varieties (such as P-142) seem notably prone to injury from the arsenate. Commercial releases showing a fair degree of damage are (in descending order) Nugget, Pennstar, Fylking, and Adelphi blends; many others show slight damage.

Engel and Duell discuss the response of turfgrasses to growth regulators, not currently recommended (except perhaps for specialty use, such as prevention of seedhead formation). Growth control is complex and tricky, and the chemicals have potentiality for damaging turf.

TURF HERBICIDE OVERVIEW

Dr. S. W. Bingham, Virginia, summarizes herbicide treatment of turfgrass nicely in the January, 1974 VPI "Virginia Plant Protection Newsletter."

Bingham notes that with turf, herbicide use must be periodical, because various factors make the influence of a treatment only temporary; weeds germinating later are unaffected by the treatment, and there are "losses" of potency at each step of the biological chain. In lawns having both perennial and annual weeds (as do most in Virginia), herbicide treatment is recommended March-April and August-September. Even then particularly tough competitors, such as goosegrass, may never become completely controlled.

Most herbicide applied eventually reaches the soil, either through drift, exudation by roots, or eventual decomposition of vegetation. There it is ordinarily metabolized quickly and inactivated, especially with types of herbicides that wash through the soils slowly. Bingham notes that 2,4-D persists 3-4 weeks, silvex 5-6 months, and terbutol 12 months or more. Dicamba, often harmful to ornamentals because it leaches so readily through the soil and is picked up by root systems, typically takes 2-3 months to degrade. Persistence times are charted for various other pre-emergence products.

The chief difficulty with pre-emergence herbicides is inhibition of new root growth (or any root growth of seedlings). Such herbicides are especially deleterious to weak grasses having inadequate root systems. Herbicide treatment lessens vigor, and thus may indirectly increase damage from disease. The rooting of newly laid sod is especially interfered with, most serious with bermudagrass, slightly less so with bentgrass, Kentucky bluegrass, and tall fescue respectively.

STRIPE SMUT PECULIARLY INFLUENCED

Robertson and Hodges, Iowa, in a report from the August 1973 Phytopathology, note that small amounts of the fungicide benomyl are apparently utilized by the stripe smut fungus and stimulate its growth; higher concentrations kill the disease organism. The authors speculate that benomyl treatments may stimulate stripe smut temporarily, prior to its eradication; this in turn may encourage creeping bentgrass for a short period. Many cases have been reported where systemic fungicides such as benomyl cause a disease-resistant variety of turfgrass to become more susceptible to diseases against which it is normally resistant.

GRASS WALKWAYS

Dr. Glen Wood, Vermont, sent a reprint of research reported in the November-December 1973 Agronomy Journal, having to do with the success of a much traveled path when planted to a special combination of grasses (Manhattan ryegrass predominating; Fylking, Merion, Nugget and Pennstar bluegrasses included). Various "energy absorbing" materials to forestall soil compaction were utilized in conjunction with the grass.

Loose rock was not good, grass never establishing on it. Bricks oriented in the direction of the path were not too good, but those laid perpendicular (with interstices of 5 centimeters) performed quite well. Surprisingly, Coca-cola bottles set inverted into the soil with only the bottoms at path level proved best of all, the grass flourishing between the bottles (however fear of breakage makes this impractical).

The experiment was abandoned after several months, but was felt to show that good turf (in this case primarily due to the fast-establishing Manhattan ryegrass) could be maintained in combination with materials that prevented soil compaction; no grass at all was able to live in this pathway when planted to native soil without any buffering materials.

MONOCULTURE RECEIVES INCREASING MENTION

In gardening as well as in ecological and crop circles, an awareness of the risks inherent in monoculture is increasing. Adele Greenbalm, writing in the Nassau County Agricultural News (January), makes the point rather expressively for lawns:

"A basic tenet of lawn care is always to use a blend of grasses when reseeding. Each grass variety offers a different response to physiological stress (shade, drought, lawn mowing, etc.) and above all, to disease. Some grasses are more resistant to Leaf Spot, some resistant to Stripe Smut, or more susceptible to Rust. Plant only one variety of grass, and your lawn will be totaled if the wrong disease comes around. Plant a blend and the odds go up on still having a stand of grass when Father Nature strikes with a heavy hand."

HERBICIDES ON OVERSEEDED GOLF GREENS

A study by Mississippi researchers on the effects of benefin and DCPA on overseeded Tifdwarf bermudagrass golf greens is reported in the November issue of Weed Science. Annual and perennial ryegrasses, Poa trivialis, creeping bentgrass, and fine fescue were the overseeded species. Poa trivialis and annual ryegrass were more seriously injured by the herbicides than were Penncross bentgrass, Dawson fescue, or Medalist ryegrass. Earlier (February) treatments bothered the overseeded grasses more than did later (March or April) ones, and benefin was more injurious than was DCPA (although the latter delayed revival of the bermuda).

RESIDUAL LIFE OF LAWN HERBICIDES

Research in Oklahoma on the degradation of familiar herbicides often used on lawns was reported in the November Weed Science. Altom and Stritzke state that the average half life of 2,4-D in the soil is four days, silvex 17 days, 2,4,5-T 20 days, dicamba 25 days, and picloram more than 100 days. Except for 2,4-D (which was equal in all soils), degradation was more rapid with soils under grass than with soil under trees.

MERION SOD EXTOLLED

Frank Stadelberger, writing in Nassau County Agricultural News, January (Almost Instant Lawns), boosts sodding as a means for creating usable turf in a hurry. He emphasizes that "Merion bluegrass is the predominant variety grown on Long Island today."

GRASS FIELD WEED CONTROL REPORTED

Dr. W. O. Lee, Oregon, reported in the November Weed Science on his testing of pre-emergence weed control in commercial lawnseed plantings. One inch band of activated carbon protected the crop grasses from herbicides meant to control weeds. The amount of carbon needed varies with the herbicide and its strength, and is more effective (greater safety margin) with diuron than with the triazines or terbacil.

ARTIFICIAL TURF HEATS UP

Temperature measurements of turf made at the University of California were reported in the January Western Landscaping News. When air temperature was 78° F., unmowed grass was only 67°, mid-height grass 79°, short-mowed grass 83°. Exposed soil was 85°, but artificial turf was an exceptionally high 125°.

WEED INFLUENCE GREAT

An Ohio State study, reported in the American Horticultural Society "News and Views" indicates how repressive weeds can be. The investigation involved shrub holly, but the weeds (planted in competition to the holly, from 0 to 32 in the container) are familiar to lawnsmen - pigweed and crabgrass. A single crabgrass plant reduced holly growth by as much as 59 percent, and 16 weed plants reduced growth as much as 78 percent.

"WORST" EAST COAST LAWN PROBLEM

The Cooperative Extension Service for Nassau County (Long Island) concludes that Fusarium blight on Merion Kentucky bluegrass is "now one of our main turf diseases" on Long Island. It is a summer disease, most prominent in sunny, warm locations, and more evident under heavy fertilization than light. Liming acid soils, keeping the lawn well watered (but not overwatered), and removing thatch, are sometimes helpful in minimizing the disease. Fusarium blight has been very difficult to control with traditional fungicides, but the newer systemics help if applied sufficiently before onset of disease, so that the systemic has time to spread through the grass plant before disease strikes. Cornell recommends compounds such as benomyl drenched into the soil, with re-treatment in two weeks.

SEED DORMANCY

A study by Arizona agronomists, on sideoats gramagrass (Bouteloua curtipendula), indicated that the marked dormancy that the seed exhibits is encouraged by the floral parts. The research was reported in the January-February Crop Science. Putting the seed in soil, enriching its oxygen environment, or treating with sodium hypochlorite, helps break dormancy. Lightweight caryopses, impermeable seed coats, and the presence of an inhibitory compound, contribute to dormancy. These same factors may apply to other grass species (certainly heavy Kentucky bluegrass seed germinates more vigorously than does lightweight seed).

BENTGRASS COLOR

Color variation of bentgrasses is reported in the February issue of HortScience by Illinois researchers. Light colored cultivars exhibited a relatively lesser amount of iron (and chlorophyll) in the foliage, and a higher phosphorus-iron ratio. This could be temporarily "corrected" towards a darker hue by iron treatments, but these were not very long-lasting and would be needed several times during the growing season to maintain a dark color. Naturally dark cultivars responded little to iron treatment.

FORM OF NITROGEN IMMATERIAL

Research reported by Warncke and Barber, Purdue, in the November-December Agronomy Journal, indicates that uptake of nitrogen by a grass (corn) is not materially influenced by whether the nitrogen is in the ammonium or nitrate form. Both forms were absorbed at about the same rate in this research, and the uptake rate of either could be increased (at the expense of the other) by supplying more of that particular form of the nutrient.

HERBICIDES AID SPRIGGED GRASS

Research by Johnson, Georgia, on establishing Tifway bermudagrass, is reported in the November-December Agronomy Journal. Fertilization, of course, helped to establish the stand. Dacthal retarded early growth of the grass, but this disadvantage was overcome within eleven weeks. Arsonate plus 2,4-D was not phytotoxic; dacthal, followed by arsonate-2,4-D, provided excellent season-long weed control. When the latter was repeated as much as 96 percent ground cover was obtained in the season, as compared to only 36 percent where no herbicides were used.

NITROGEN INCREASES FAIRY RING

Research at Michigan State, reported in the November-December Agronomy Journal, indicates that Tricholoma fairy ring is encouraged by nitrogen fertilization in Merion Kentucky bluegrass sod. It is believed that the stimulation is direct, and not caused by greater acidity resulting from the fertilizer.

BLUEGRASS SEED PRICE RISE

The increased cost of grass seed was taken note of in the December HortScience, but the reason given rather unusual. The explanation, attributed to Joseph Newcomer, indicates that the situation with grass seed parallels that with grain, "Just as the Russians bought up large quantities of wheat . . . so an export raid on U. S. grass seed supplies has been quietly conducted by various foreign nations . . ." If he is thinking of bluegrass, Mr. Newcomer must be a bit out of touch with the times, for he adds, "Also contributing to domestic shortage were unfavorable wet weather conditions in major Midwest seed-producing areas, both during the 1972 grass seed harvest season and the 1973 planting season," -- obviously not much of a factor with fine turf cultivars now produced mostly in the Northwest.

CAUSES FOR WINTER INJURY

Jung and Kocher, Pennsylvania, report upon Influence of Applied Nitrogen and Clipping Treatments on Winter Survival of Perennial Cool-Season Grasses, the the January-February Agronomy Journal. Several of the species investigated were pasture rather than fine turf varieties, but the findings are of interest for the results with several Kentucky bluegrass cultivars, and particularly perennial ryegrass. Hard freezes in late March seemed the main cause of turf loss, susceptibility (under test conditions) being influenced mainly by 1) cultivar cold tolerance; 2) nitrogen fertilizer; and 3) clipping treatments through the previous spring and summer. On the whole, the bluegrasses were far more winter hardy than were the perennial ryegrasses.

As to fertilization, winter loss was inconsequential with bluegrasses under low rates of nitrogen, and of very little concern even at high rates (especially with common bluegrasses, although select cultivars such as Belturf suffered as much as 20 percent loss at very high nitrogen levels). Pennfine perennial ryegrass suffered almost no loss when unfertilized, but as much as 71 percent loss when heavily fertilized (common ryegrass from Oregon suffered 46 percent loss when unfertilized and was almost wiped out at intermediate and high fertility levels). Norlea behaved much like Pennfine. Kentucky bluegrass was little damaged by any clipping regime, but perennial ryegrass suffered less when clipped only at mature rather than immature stages of growth.