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

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PRESIDENT CARNES PLANS ANNUAL MEETING

A tentative date of June 20 and 21 has been set for the Annual Meeting of the Institute, in Salem, Oregon. June 20 will be a business session and the 21st will be spent on a tour of the Williamette Valley turfgrass production area. For the ones who were fortunate enough to attend last year's meeting, you will recall that the all day business sessions resulted in a fine meeting. Programs were set forth, some of which have been accomplished and others are in the process of being accomplished. During the day of the tour, everyone had the opportunity to visit all types of production fields, also a visit to the trial grounds at Oregon State University. Then we wound up with a Bar-B-Q and a lot of good, cool refreshments. A similar tour will be planned, and we hope to have even more diversification this year in order to give everyone a perspective on turfgrass production in the Williamette Valley.

You will be receiving an additional notice regarding the Annual Meeting and we encourage each and every one to plan his time so as to attend this informative meeting and participate in the workings and activities of your Institute.

J. L. Carnes, President

OUR THANKS

We are grateful to Mr. Carnes for the above article; he was also kind enough to write an additional article for this issue of Harvests, which appears on page 2.

CALL FROM CANADA

A. H. Mitchell, of Canadian Homes Magazine, telephoned asking for photos such as had appeared in the Institute story in Flower and Garden magazine about a year ago. We are delighted to have this interest shown, and furnished Canadian Homes Magazine with a series of photos of quality grasses that we hope will prove useful.

ICE DAMAGE TO GRASSES

Freyman, British Columbia, reports in the January, 1969 Agronomy Journal that Kentucky bluegrass and other species suffered little damage from being covered with ice so long as the leaf tips protruded above the ice. Apparently there was release of toxic carbon dioxide and adequate gas exchange. Fine fescue did not suffer when completely encased in ice. In contrast all legumes were seriously injured.

THE PRESIDENT REPORTS TO THE MEMBERS

Since the election of the new Executive Committee, a change in location for the Institute, with the exception of the Director's office in Marysville, Ohio, has taken place, from the Midwest to the Pacific Northwest. The new officers are: Vice President - James Jenks, Jr., Salem, Oregon; Secretary-Treasurer - Howard Mader; Yours truly, Jim Carnes, Salem, Oregon. The Oregon State Department of Agriculture, Department of Market Development is designated as the Oregon Administrative Offices, under the responsibility of Mr. Jay Glatt, Chief.

Although the Institute has had many successful years headquartered in Kansas City, it was felt that with the production of turfgrass moving to the Far West, and with the formation of various commodity commissions and associations in the Pacific Northwest (which give financial support to the Institute), a closer working relationship could be developed if the Institute offices were moved to the Pacific Northwest. These commodity commissions and associations were formed to represent the producer, for the purposes of promotion, research, and market development of individual turf varieties. Examples of the ones that were formed and are giving financial support to the Institute are: The Oregon Fine Fescue Commission, Oregon Highland Colonial Bentgrass Commission, Pacific Northwest Bluegrass Association, Merion Bluegrass Association, and The Penncross Bentgrass Association.

Since June of 1968 various meetings have been held to review possible new approaches for the Institute. How can it best get its message to the public and inform the Turfgrass Industry (including seed producer, dealer, wholesaler, retailer, and sod grower) on the importance of the Institute.

Proposed changes in the Articles of Incorporation and the By-Laws of the Institute were drafted. These are to be reviewed by the various members for approval, hoping to bring a new focus on the Institute and enlist support of various interested parties in the production, marketing, distribution, and user areas. There should be wider acceptance of the Better Lawn and Turf Institute, and consumer realization that the Lawn Institute Seal of Approval is comparable to the Good Housekeeping Seal.

As every member is aware, there have been many changes in production and marketing, as well as in usage of turfgrass, in the past years. Another thing not facing the turf industry 15 - 20 years ago, is the artificial turf that is now being placed on a good many athletic playing fields throughout the country. It is felt that one of the biggest problems with turfgrass and its acceptance are the maintenance problems it might have. This is a pure and simple fact of proper management. We have seen this in our own area in the Williamette Valley of Oregon where a poor maintenance program has been used on certain athletic playing fields and consequently there was a poor stand of turf before the playing season and before the season was over it eventually became a mud puddle or dust bowl.

We are also aware that there are many new types of turfgrasses that have been developed for the market over the last 10 years. Over the next 10 years there will be a program of much more specialized turfgrass usage than there has been in the past. We who are a part of the Institute feel that the Institute is the medium to carry the story to the ultimate consumer. There is no better source of information available than through the Better Lawn and Turf Institute, for people interested in turf.

IN PRAISE OF FESCUE-BLUEGRASS

A staff writer interviewing Bill Lyons, well-known golf turf specialist in Ohio, and proprietor of the "Lyons Den", finds that Bill recommends a fescue-bluegrass combination for seeding fairways. " -- fairway grass mixture includes 28 lbs of Pennlawn fescue, 8 lbs. of common Kentucky bluegrass and 4 lbs of Merion ---"

ASTA CLIP SHEET APPEARS

Under the title "Plant Seed to Beautify America", the attractive clip sheet (sent to 4,000 newspapers nationally by ASTA) was mailed early in March. The Institute contributed several items, reported upon elsewhere, and 3 photographs. Excellent coverage and emphasis is given quality lawn seed, and occasional direct reference to the Lawn Institute itself. The "Fine Lawn Grasses Provide Plus Service" was uppermost on page 1, supplemented by a half-page photo; equally featured was "Exciting New Lawn Grasses" heading the back page.

USDA REPORTS

The March issue of Agricultural Marketing reports "On Your Beautiful Lawn". The story professes to explain the protection afforded consumers through the Federal Seed Act, and mentions seed purity, noxious weeds and germination. There is favorable mention of quality lawn species, viz. " -- don't forget that the seed ultimately is the lowest cost item in establishing and maintaining a good lawn --". Also, "These include Kentucky bluegrass -- red fescue, Chewings fescue and the bentgrasses.", and "In shady areas, red fescue, Chewings fescue -- grow best. Also red fescue, Chewings fescue, and rough bluegrass are often mixed with Kentucky bluegrass for shady areas. Bentgrasses, Kentucky bluegrass -- grow well with more sunlight."

MAGAZINE STORY

A story tentatively entitled "Modern Lawn Maintenance" was completed for the Trade Press Publications, expected to appear in the April issue of Building Maintenance and Modernization. The vehicle of the story in this case is equipment, which affords mention of the grasses of Institute concern, and the appropriate maintenance for them. If the editorial layout is attractive we hope to have reprints for distribution.

INSTITUTE PARTICIPATES

The letter from Secretary Hardin, reproduced on the following page, typifies the promotional program in which the Institute has been active (Lawn and Garden Week). It is noteworthy that "urbanized agriculture" now carries sufficient status to have the ear of the Secretary of Agriculture, who not long ago was concerned mainly with farm matters.

PLEASE SEE NEXT PAGE FOR SECRETARY HARDIN'S LETTER.

DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

March 6 1969

Dr. Robert W. Schery
Director, Better Lawn and Turf
Institute
Route 4, Kimberdale
Marysville, Ohio 43040

Dear Dr. Schery:

The seasonal clock is set and we would like you to join us as we celebrate spring's return at 2:08 p.m., Thursday, March 20.

Our greeting takes the form of a Growing with America Festival in the Patio of the Department's Administration Building and the beginning of National Lawn and Garden Week, March 20 to 26. Both the Festival and Lawn and Garden Week are part of a nationwide effort to use the knowledge, dedication, and enthusiasm that have produced our agricultural abundance in creating a more satisfying environment for all Americans.

On display in the patio will be a series of exhibits and demonstrations ranging from ways to combat lawn pests and the best way to prune shrubs and trees, to mini-gardens for the city dweller, youth programs for urban areas, and conservation and landscaping practices for schools and homeowners.

You are most cordially invited to attend the brief opening ceremony at 1:45 in the Patio and to observe some of the demonstration exhibits. Mrs. Hardin and I will be pleased to greet you at an informal reception between 3:00 and 4:00 p.m.

I look forward to hearing that you will be able to be with us on the 20th.

Sincerely,

Clifford M. Hardin

Clifford M. Hardin
Secretary Agriculture

CONTRIBUTION READIED FOR GARDEN MAILING

Dr. Schery was invited to prepare manuscript for a national mailing of a "clip sheet" going to 4,000 newspapers nationally, sponsored by the National Garden Bureau with a contribution from the Lawn and Turfgrass Division of the American Seed Trade Association. We were delighted to be a participant in this excellent venture, which extends and amplifies the more limited mailing of the Institute's own press kit.

Thirteen titles were included, and four photographs with appropriate captions. Length of the items ranged from a paragraph to approximately two pages. It is anticipated that approximately 100 column inches of newspaper space is embraced by this coverage.

Samplings: A short item detailing that crabgrass is never found in lawnseed; another extolling quality lawnseeds; an assurance that serious weeds are seldom in lawnseed; seasonal suggestions that include spring overseeding and fertilization; a review of the "Exciting New Lawngrasses"; the importance of lawns to landscaping and to Lawn and Garden Week; how to make spring lawns greener; mulching; how lawns refresh the environment; advantages of lawngrass mixtures; fertilization; proper mowing; weed control.

A few quotes: "You'll get little argument that there's any carpeting so attractive as Kentucky bluegrass, bentgrass or other fine turf around the home." "Fine fescues may be just the thing under trees, bluegrass well suited to sunny areas. And if you insist on mowing the lawn short, a bentgrass such as Highland makes a tighter turf." " -- with no injury to Kentucky bluegrass, fine fescue, most bentgrasses or perennial ryegrasses.", "New bluegrasses are almost too numerous to name. -- fine fescue varieties have long been noted for their tolerance of shade, drought, poor soil and low fertility. -- Highland, the workhorse, is joined by Exeter, Holfior, and renewed supplies of Astoria. Penncross is an outstanding creeping bentgrass --".

STORIES APPEAR

The February issue of The Bull Sheet, official bulletin of the Midwest Association of Golf Course Superintendents, carries a reissue of the Institute's story "The Curious Case of Highland Bentgrass". This story states, "The best lawngrasses from seed are the well-known Kentucky bluegrasses (Poa pratensis), the fine or red fescues (Festuca rubra), improved cultivars of which are grown in Oregon, and the bentgrasses Agrostis, in various species). Kentucky bluegrass and fine fescues are the main ingredient in quality lawnseed mixtures for the northern two-thirds of the nation, while the bentgrasses are mostly used alone for specialty turfs --"

In addition this issue of The Bull Sheet carried an updating, under the headline "Recent Letter to the Editor from Dr. Robert Schery". This mentions research results reported at the Oregon Seed League Meetings, in which "it seemed apparent that little or no Poa annua contaminates Highland bentgrass in its main growing area --- so it looks as though Highland bentgrass, from its main producing area, the Silverton Hills of Oregon, for all practical purposes comes to market free of Poa annua."

NEW YORK PARKS DEPARTMENT

In response to a request from Art Doody, Department of Parks, City of New York, Institute literature on lawn care was forwarded.

TURFGRASS INTERESTS OHIO NURSERYMEN

The week of January 27 the 40th Annual Shortcourse by Ohio State University for Arborist's Turf Management Specialists, Landscape Contractors, Garden Center Operators and Nurserymen was held in Columbus. Dr. Schery attended a portion of the sessions on behalf of the Institute. Presentations were chiefly by staff members of Ohio State University (to which there have been addition of a number of specialists in recent months), and Dr. Houston Couch of Virginia Polytechnic Institute as a featured visiting speaker. Topics covered included the Identification of Turfgrasses", "Handling Sod After Cutting", "The Importance of Seed Quality", "Herbicide Mixtures for Broadleaf Weed Control in Turf", "New Ideas on Thatch", and special emphasis on turfgrass diseases, discussion of which is reviewed in the following paragraph.

Dr. Ronald R. Muse, a former student of Dr. Couch at Penn State, is now in charge of plant pathology research at the Wooster Experiment Station. He spoke on "Helminthosporium Diseases of Turfgrasses", with a series of close-up slides to show the symptoms. Common leafspot is from H. vagans, attacking bluegrass lawns in the cool-humid parts of the year. Sometimes in summer this becomes severe enough to cause rot of the crown and roots. Merion, Fylking and other newer varieties are more resistant to this Helminthosporium species than is common bluegrass. On the other hand the summer melting out disease, from H. sativum (H. sorokinianum), comes in hot humid weather. The symptoms on the grass are exactly like those of H. vagans. In this case common bluegrass is less susceptible than is Merion, and the disease also attacks bentgrass.

Other Helminthosporium species are not quite so troublesome. Zonate eyespot, from H. giganteum, is a hot weather disease that attacks many grasses including weeds such as crabgrass. Net blotch, from H. dictyoides, attacks fescues. Brown blight of ryegrass, from H. siccans is a cool weather ill that causes crown rot of ryegrass in summer. There is also a red leafspot on bent, and a leafblotch on bermuda, from other species of Helminthosporium.

Dr. Muse suggests early diagnosis by daily examining the turf, and preventive treatment if necrotic spots are noted. He recommends higher mowing, perhaps thinning or aerification to better "ventilate" the turf. Then a spray should be applied each 7 to 14 days from late April through June. His tests have shown Daconil at 4 oz/M to be effective, as is also Dyrene, Tersan-OM, Captan, Kromad, Actidione, etc.

Dr. Houston Couch talked on "How to Recognize Common Lawngrass Problems". His discussion referred almost entirely to diseases, his field of specialization. With Dr. Muse having discussed Helminthosporium, Couch merely said that the importance of this disease is great. Even though it is not always too evident or spectacular, it is always around.

He went on to discuss snowmold, really a series of diseases which occur in cold, wet weather. Slides were shown of Fusarium patch ("pink snow mold"), and Typhula blight ("gray snow mold"), the two most serious. It was pointed out that Typhula can be distinguished from Fusarium by the hard fruting bodies imbedded in the grass leaf (perithecia). Fusarium attacks almost all grasses, but Typhula is serious only on bentgrasses. Another disease in this group is frostscorch, which can be identified by the sclerotia being on the surface of the grass leaf.

Continued on next page

TURFGRASS INTERESTS OHIO NURSERYMEN (Continued)

The familiar dollarspot was next reviewed. It is most severe when the soil is dry, and sometimes the loss of turf due to the disease is confused with drought injury. It can be recognized by the blanched leaf sections having a reddish margin. Rhizoctonia brown patch is troublesome on a number of grasses in mid-summer. Fescues are relatively resistant, however. It can be expected anytime that night temperature stays above 75° F. Undertake preventive spraying whenever night temperatures are this high, even if the disease cannot be seen.

Fusarium blights have been particularly troublesome in recent years. This is the same disease that causes the "whiteheads" in the seed fields. There are two species, including the familiar F. roseum. The turf develops a frog-eye effect in summer. It is worst in full sun. Early symptoms are a leafspot phase in which there is a rather vague blighting and yellowing of the leaf. It is favored by thatch accumulation, because Fusarium is a good saprophyte, existing on the thatch. Fore, at 4 oz/N is oftentimes good for control, and other times not; yet it seems to be one of the better fungicides.

For fairy rung, Couch feels there is no solution other than fumigation. Other diseases discussed were Corticium redthread, in which the terminal part of the leaf turns red (fescues are especially susceptible, but also Merion bluegrass). Rust, such as occurs on Merion, controls well with Actidione-thiram. Slime molds are easily checked with almost any fungicide; they are troublesome only because as they grow over the grass leaves they block out light.

WINTERSEEDING STORY PLANNED

Dr. Schery visited with Ray Jensen, owner of Southern Turf Nurseries, Tifton, Georgia on February 18. Southern Turf Nurseries is active in supplying golf courses throughout the Southeast and the Caribbean area with select bermudagrasses for fairways and golf greens. Jensen has gained a great deal of practical experience in golf green management, and is interested in publicization of the winterseeding practices. As publisher of the Southern Turf Newsletter, he is reserving space in a late summer issue for a winterseeding story from the Lawn Institute, authored by Dr. Schery.

Mr. Jensen recognizes an increasing sophistication for the winterseeding of golf greens, especially in the heavily traveled tourist areas of the southeast. He finds increasing use being made of fine-textured grasses, although the less skilled superintendents sometime have difficulty establishing these slower starting species quickly enough compared to the conventional ryegrass. In spite of ryegrass being less satisfactory at spring transition time, requiring more mowing, and often being somewhat a less playable putting surface than the fine-textured species, Jensen does recommend including it in a seeding mixture for "insurance" of catch. He recognizes the usefulness of bluegrass-fine fescue seeding mixtures where skilled supervision is possible, but generally suggests something on the order of a Poa trivialis-bentgrass-ryegrass combination for general all-around utility.

LITERATURE SENT

Leo P. Boucher, Training Manager, Employee Relations Department of Yale University, requested materials "to reinforce the program" of training grounds maintenance personnel. Mrs. Rush forwarded a hefty collection of reprints, and a copy of The Householder's Guide to Outdoor Beauty. We are pleased to provide the Institute's side of the maintenance story to effective training grounds, such as this at Yale University.

UNIVERSITY OF FLORIDA

Turf research is receiving added emphasis at the University of Florida. Several new staff positions are opening up, in addition to the bringing in of Dr. Eliot Roberts as head of the Department of Ornamental Horticulture. Dr. Schery visited with Dr. Roberts, Dr. Granville Horn and others at the Gainesville campus in late February; and with Dr. Evert Burt, manager of the Plantation Field Laboratory in the Fort Lauderdale area.

The research program in Florida in general has been well reported in the Conference Proceedings, which have been reviewed from time to time in Harvests, and in "Progress Report I'" by Horn and Meyers, recently issued. Management studies relate to soil amendments, fertilizers, nematocides, thatch removal, etc., on all of the familiar southern turfgrasses. To a limited extent varietal testing and strain selection is being undertaken on some of the species. In 1968 there were 76 formal investigation projects under way on ornamental plants, 21 of them involving turfgrasses. Since most southern grasses are vegetatively planted, members may be more interested in the winterseeding studies than in other research reported.

This year (1968-9) winterseeding was slow because of a relatively cold autumn and early winter. This proved a disadvantage especially to species that are slow to germinate. On February 18, time of visit by Dr. Schery to the experimental plots, most winterseeding plantings had filled in reasonably well, but were not so dense as would be expected this late in the season. As might be anticipated, winterseedings in the Fort Lauderdale area were better established than at Gainesville.

At Gainesville seeding combinations that contained Kentucky bluegrass or Penncross bentgrass, alone or in combination, looked very good. However, the degree of difference between the best and the poorest of the seedings was not great. All would have made a nice winter putting surface given a little more time or little warmer weather. Both at Gainesville and Fort Lauderdale the color and texture of seed blends containing bluegrass was preferred over that of ryegrass or Poa trivialis. The official recommendation is still a combination of Kentucky bluegrass, fine fescue and bentgrass, with optional inclusion of other components as taste dictates.

Florida researchers report satisfactory performance of the new perennial ryegrass varieties, although at Gainesville a seeding designed to show comparisons was "washed-out" by a heavy rain soon after seeding. At Fort Lauderdale the perennial ryegrass plantings were satisfactory, but no common perennial ryegrass was planted for comparison. Pelo looked somewhat superior to NK-100 (which was more ragged) in these comparisons.

In Florida nematodes continue to be a problem on the finer turf varieties, but don't bother bahia. A new Rohm at the Haas chemical has operated satisfactorily to keep Poa annua out of bermudagrass greens, effective at rates from ½ to 1½ lbs per acre (bermuda can stand 4 lbs, but northern species succumb the same as the Poa annua). Interestingly, fungicide application to centipede have resulted in superior performance of this species, thought to be little afflicted by disease. A new centipede variety tentatively named "Tennessee Hardy" has been selected at the University of Tennessee, reportedly hardy farther north. Commercial centipede seed, mostly harvested by Ray Jensen of Tifton, Georgia, is of unselected parentage.

WINTERSEEDING RESEARCH

Meyers and Horn reported to the 1968 Florida Turfgrass Conference on "Selection of Cool Season Grass Mixtures for Overseeding Golf Course Greens". We have reported Florida results, from time to time, which are probably the most comprehensive and indicative within the winterseeding market area. The complete report is contained in the Proceedings of the 1968 conference.

Tests were undertaken in 1968 at a number of locations throughout the state, but turfgrass loss due to Pythium made the readings erratic at several locations and not included in the statistical listing. Published scores were for Gainesville in 1967, Orlando and Ft. Lauderdale in 1968. In all of these locations the bluegrasses, fine fescues and bentgrasses performed well, better than Poa trivialis and far better than domestic ryegrass.

In Gainesville first ranking went to the combination of Pennlawn fescue and Kentucky bluegrass, followed very closely by Kentucky bluegrass alone, then Pelo ryegrass, a combination of Penncross bentgrass with Pennlawn fescue and Poa trivialis, and fifth Penncross bentgrass alone.

At Orlando Penncross bentgrass by itself rated first; followed by a combination of Penncross with Pennlawn, Kentucky blue, ryegrass and Poa trivialis; with similar combinations very close, as were also Park bluegrass and Kentucky bluegrass planted alone. Pelo ryegrass rated poorly at this location.

At Ft. Lauderdale Park bluegrass alone led the parade, followed by Penncross bentgrass, Seaside bentgrass, and then closely bunched various combinations of Kentucky bluegrass, Penncross bentgrass and Poa trivialis.

Officially the University of Florida recommends four winterseeding combinations: Penncross bent with Kentucky bluegrass, Pennlawn fescue with Kentucky bluegrass, Penncross bent plus Kentucky bluegrass plus Pennlawn fescue, and Penncross bent plus Kentucky bluegrass plus Poa trivialis. Depending upon the price of seed the University suggests that Seaside or Highland might substitute for Penncross, Illahee or Chewings for Pennlawn fescue, and Newport, Delta or Park bluegrass for common.

All in all the research at the University of Florida is an affirmation of the usefulness of the main fine-textured turfgrass varieties.

SYNTHETIC TURF

During the Oregon Seed League Meetings there was discussion from the floor concerning artificial turf, now that colleges seem able to find a quarter million dollars to "permanently" carpet football fields. Monsanto Chemical Company, manufacturer of "Astroturf", in its magazine for December, extols this artificial grass as "no passing fancy" in the story "Revolution on the Gridiron". The main argument is that there is less knee injury to athletes due to twisting, since typical football cleats are not used on this carpeting. It is said that a survey showed an average of 9.6 knee and ankle injuries suffered per team on conventional grass, but only 1.6 on artificial turf. Daugherty, of Michigan State, predicts that by 1973 most major colleges will have installed artificial turf. The Monsanto product has already been installed on 8 football fields, as well as a few tennis courts, golf courses and landscaped areas. Other surmised advantages are detailed in the story, too, including better play under wet conditions, better background visibility, freedom from mud, etc. But apparently the main sales pitch is for football fields, and the main argument advanced "safety". Of course football would be a lot "safer" if they didn't block and tackle, either!

LAWN SEEDING MOVES SOUTHWARD?

When Dr. Schery was in the southeast recently, he discussed turfgrass maintenance in the area with Dr. Homer Wells, Pathologist at the Coastal Plain Experiment Station, Tifton, Georgia. It was possible to inspect a new lawn seeded to bluegrasses in Atlanta with Dr. Wells, who is advising the experimentally minded owner (Waller) on this project. Although the lawn is low-lying and exposed to full sun, it is hoped to maintain a bluegrass planting (made to a combination of Fylking and Merion) through the summer in this climatically difficult area. Dr. Wells believes that the advent of the new systemic fungicides should make possible the maintenance of bluegrass and other northern species farther south than is conventionally customary. If this proves true there should be possibility for using lawn seed farther south than has heretofore been possible. It will be interesting to watch progress with the Waller lawn, upon which a number of experimental fungicides will be tried.

Wells recommends Terrazol as a specific for Pythium. Pythium became quite troublesome on border states and northern golf greens during the summer of 1968, but through the years has principally been a damping-off disease of new seedings in the south. Wells thinks this need not be a problem, and certainly the Waller lawn was beyond the damping-off stage. Dr. Wells emphasizes that granular materials are probably not too good for disease prevention, although to a certain extent the mercurials may volatilize enough to give protection to the foliage. Wells would prefer a fine mist spray that completely coats the vegetation.

Apparently label clearance will not be obtained in time for 1969 sales of DuPont Banlate, a new and promising systemic (DuPont 1991). Experimental supplies of the chemical, however, are available for use on the Waller lawn. Wells believes that related chemicals used for de-parasitizing poultry and livestock through the years (Merck) may be just as effective and marketable rather quickly in that toxicity clearance has already been obtained. The product is currently under test for its effectiveness as a turf fungicide. Both of these materials are believed to provide fungicidal protection for a period of a month following application. Several other candidate fungicides of the systemic type are under test, including Demosan. If expectations materialize, this will be a break-through permitting wider usage of seeded grasses and a fungicidal program within the capacity of the homeowner as well as the professional.

STORY IN GARDEN SUPPLY MERCHANDISER

The Institute was pleased to have the story New Lawn Seeds Ready to Sprout Profits appear in the March issue of Garden Supply Merchandiser. The story has been reprinted and circulated to members. It discusses for trade outlets current developments within the lawn seed industry, and the availability of many new, fine varieties. The tone is set by the opening statements, "These are exciting times in the lawn seed industry. A torrent of new varieties, especially in Kentucky bluegrasses and fine fescues, is streaming through the testing phases -- ". The story goes on to list and characterize present varieties.

INFLUENCE OF LIGHT

Dr. George McBee, Texas, reports on response of 4 bermudagrasses to differing qualities of light. Floraturf was best, Tifway and Tifdwarf intermediate, common poorest, under all regimens. Floraturf was most tolerant, standing some shade. All varieties grew better under red light (blue eliminated) than under blue (red eliminated).

JENSEN COMMENTS

E. Ray Jensen, owner of the Southern Turf Nurseries, has long been an acquaintance and friend of the Institute. On several occasions Institute stories have appeared in his Southern Turf Newsletter. It is always interesting to have Ray's observations on the status of turfgrass in the southeast, where he is active in the sale and planting of bermuda sprigs (as well as centipede seed) in many states and the Caribbean Islands.

Ray is uncertain about the lasting interest in artificial turf, at least for golf greens. He is aware of one case (in Tennessee) where 9 greens laid to artificial turf did not perform up to specifications (according to the proprietor), and have been pulled up and a court suit initiated against the manufacturer. Among other things, the ability of pitch shots to "hold", and putting quality, were not satisfactory.

As to use of artificial grass in stadia Jensen also has reservations. He has heard that there is somewhat greater hazard with certain types of injury, particularly with bruises and scrapes that do not heal so readily. One stadium in his experience turned a brownish color after one year and had to be redyed. Jensen is currently advisor on the Atlanta stadium, where Tifway bermuda was planted and has been performing satisfactorily.

Tifdwarf bermudagrass has dominated putting green plantings since development a few years ago, and now accounts for approximately 90% of new installations. In programming winterseeding recommendations, Tifdwarf greens should be increasingly kept in mind. Jensen feels that Tifdwarf takes winterseeding better than the Tifgreen so universally planted heretofore.

Jensen currently recommends Tifway sprigging for stadia and other sports grounds. Many bermuda fairways are winterseeded, conventionally to ryegrass. But Jensen has noted that fine fescue fairway seedings give a stiffer, better playing surface than does ryegrass, under the ½ inch mowing that is required today for the good golfer.

TURFGRASSES FOR FLORIDA

In a summary of turfgrass research at the University of Florida for 1968, Dr. Horn reviewed the various turfgrasses and varieties considered suitable. In general the northern grasses are only for winterseeding, such as of golf greens. Horn had this to say about them:

Bentgrasses -- "Penncross, Highland, Seaside and others were overseeded to Tifdwarf bermudagrass and made excellent putting green turf. Penncross was best and Highland or Seaside second best."

Bluegrasses -- Park, Delta, common Kentucky, Fylking, Windsor, Prato, and Canadian bluegrasses were compared. Canadian blue was outstanding and Park or Delta close seconds. The bluegrasses are slow to become established but make excellent putting surfaces in January and February."

Fescues -- "Creeping fescues make excellent putting surfaces and are recommended. There is no place in overseeding in Florida for tall fescues like Alta or Kentucky 31; Pennlawn, Chewings and Illahee creeping fescues give excellent putting green surfaces. They are fast in becoming established, have excellent color and do not compete with bermudagrass in the spring."

THE CHANGING TIMES

Not so long ago turfgrass and ornamentals received little other than neglect from the agricultural fraternity. How times have changed is indicated by the program for the Association of Southern Agricultural Workers, meeting in Alabama, in February. In addition to familiar types of papers on agricultural crops, which often provide fundamental information for garden plants, too, one notes such titles as "Phytotoxicity of Pre-emergence Herbicides Used to Control Poa Annua on Overseeded Bermudagrass Turf", "The Phytotoxicity of Six Herbicides on Ten Southern Turfgrasses", "Utilization of Composted Garbage for Turf Establishment", and "The Effect of Mowing Frequency and Fertilization on the Persistence of Weeping Lovegrass". Even the soils people are thinking more about urban areas, with presentations such as "Interdisciplinary Approaches to Urban Soil Survey Problems and Potentials".

ABOUT TALL FESCUE FOR LAWNS

The Sod Industry Section of Weeds, Trees and Turf magazine, January issue, carries a report by Beltsville researchers on the suitability of Kentucky 31 tall fescue for shaded areas. In the ratings for performance (the plantings were artificially covered with shading screens), tall fescue rated about a point better than its nearest competition, Pennlawn fine fescue in second place. Chewings fescue was third, Kentucky bluegrass fourth and other fine fescues sixth and seventh. Strangely, in full sun both Pennlawn fine fescue and Chewings rated slightly ahead of tall fescue!

One wonders how far it is possible to generalize from artificial shade experiments of this type. Looking at the lawn shaded by trees out the window of the office it is apparent that fine fescues have displaced tall fescue under the trees, and that Kentucky bluegrass persists there quite adequately, too. With finer-textured grasses doing so well in the shade, why even recommend a less attractive species?

STORY IN HORTICULTURE

The January issue of Horticulture magazine carried the Institute story, "Winter Feeding of Lawns", detailing current views on fertilization for bluegrasses, fine fescues and bentgrass. "At the Lawn Institute we have experienced winter demise of one bluegrass introduction from the eastern Mediterranean but never loss, due to cold, or any of the conventional domestic and north European varieties. The same is true of the fine fescues and bentgrasses such as Highland or Penncross, the other main cool season lawn species. It is primarily for these grasses that the special winter fertilizers are advocated -- ".

MORE ABOUT WINTERSEEDING

From a 1967 presentation by Ray Jensen evaluating the (then new) Tifton Dwarf bermudagrass, we read, " -- most Tifton Dwarf sods were overseeded with a multimixture seed. This is in contrast to our other surveys which showed preference of ryegrass alone for the general run of golf courses in the South." " -- convinces us that Tifton Dwarf can be overseeded successfully. On October 2 we verticut the greens lightly. Ten days later we seeded rye at the rate of 20 lbs per M. We topdressed and then seeded 1 lb of Highland bentgrass and 3 lbs of Poa trivialis ---. Before Christmas the greens were in excellent playing condition."

WEED INVESTIGATION

There seems to be a tapering off of interest in lawn herbicides, to judge by the dearth of papers presented on turfgrass weed control at the Northeastern Weed Control Conference. Volume 23 of the Proceedings contains only 4 presentations, 2 of them by Jagschitz of Rhode Island, a lengthy review of crabgrass control by a Pennsylvania team, and a brief resume on persistence of bensulide by Ahrens of Connecticut. This is perhaps understandable, in that the recent decade of research has uncovered remarkably efficient compounds for cleaning up broadleaf weeds and annual grasses in the lawn; we still look, however, for improved selective controls for perennial grass weeds.

The Pennsylvania research confirms that there are not new, striking crabgrass preventers superior to those already available. However, new combinations of herbicides for post emergence control are promising. A combination of MSMA and dicamba, and of siduron and DSMA, worked very well (although the former thinned fine fescue slightly). The familiar compounds of DCPA, benefin, siduron and bensulide continue to perform well in prevention of crabgrass, although some of them injure fine fescue slightly. Bensulide and DCPA proved long-lasting, with spring effectiveness from a September application. As would be expected, siduron had little longevity or carry-over from an autumn application.

In Rhode Island testing results were similar. DCPA gave excellent crabgrass control, but caused thinning of fescue and of bentgrass. Siduron and terbutol gave excellent crabgrass control when applied close to the time of germination, but poor results in spring from an autumn application. There was some injury to turfgrass from terbutol. Benefin performed poorly. Benefin, nitralin, siduron and a European experimental all exhibited a relatively short period of residual effectiveness. Benefin was not too effective at rates low enough to avoid turfgrass injury. DCPA was injurious to fescue.

The Connecticut research showed persistence of bensulide, which could prove injurious if good growing conditions did not continue. Residues in the topsoil the year after last treatment were estimated at about one-third original strength. Influence of the residue could be counteracted by mixing activated carbon into the soil.

At Rhode Island pre-emergence herbicides also prevented the appearance of certain broadleaf weeds. As would be expected bensulide and DCPA also restricted germination of planted turfgrass, but siduron did not. Strangely, neither did picloram, and the affects of 2,4-D, dicamba, bromoxynil and ioxynil were soon dissipated. But picloram, as well as siduron and certain combinations of DCPA controlled sprouting of dandelion seed very well. Bensulide was moderately effective, but the other pre-emergents relatively ineffective. The same general performance was noted for chickweed.

YALE UNIVERSITY REQUESTS

In early March Mrs. Rush sent a packet of reprints to Yale University, and received the following acknowledgment and thanks from Leo Boucher, Training Manager: "Thank you for your letter of March 5, 1969 and the reprints and paperback enclosures. They have proved most useful in helping to launch our Grounds Maintenance program. If possible, please send me 85 more copies of the reprint entitled 'Improving an Old Lawn' reprinted from Flower and Garden. Thank you very much for your assistance in this matter."

SPRINKLER IRRIGATION

The Proceedings of the 6th Annual Turfgrass Sprinkler Irrigation Conference held in California affords an excellent review in the "State of the Art" in this industry. Many fine engineering advances have now been made, but local variations in soil, climate and maintenance make standardization difficult. This leads to a great deal of trouble and under-equipping where automatic systems are sold on competitive bid.

University comparisons are developing nicely, and are already sufficiently far along to show that tensiometer activation (sensing dryness of the soil) can save on water consumption as compared to human judgment or evaporation pan readings. It also appears that settings on the "dry side" provide just as adequate turf as those on the "wet side". An interesting observation is that bermudagrass seems to utilize more moisture than st. augustine under identical growing conditions. Other problems relating to turf include the quality of water (salt content), fertilizer injection systems, adjustment of spray heads to soil accumulation (as from top dressing).

Most of the major considerations of the irrigation industry are engineering ones, but for arid parts of the country the biological implications and costs of maintaining turf are closely tied to performance of sprinkling systems. Industry conferences such as this, held at Lake Arrowhead in California last June, afford a valuable birds-eye view of the accomplishments and problems in the art of turfgrass irrigation.

MICHIGAN SOD AND TURF BOOKLET

Issue no. 2 of Michigan Science in Action appeared in February, devoted entirely to the turfgrass field. There are 24 pages of nicely written and well illustrated text that convey the "current status of the art" very interestingly yet factually. Of course the Michigan role is emphasized, but all in all the publication is a credit to the turfgrass industry everywhere.

A few of the observations may be of interest to members. The turfgrass industry represents a 350 million dollar annual contribution to the Michigan economy. A picture depicts the greater hardiness of bluegrass and bentgrass as compared to Poa annua. Seed blends are suggested, mainly combinations of Kentucky bluegrass and fine fescue (for shaded areas Newport, Fylking and Pennstar are mentioned, along with Pennlawn fine fescue). Most susceptible to low temperature killing in winter are fescues, ryegrass and annual bluegrass; especially resistant are the bentgrasses and Kentucky bluegrasses.

Michigan researchers have refuted summer loss being due to exhaustion of carbohydrate reserves, suggest rather inactivation of enzymes by heat (especially pronounced in Poa annua). Fine fescues are recognized as the best shade grasses, with disease rather than lack of sunlight said the cause of turf loss under shade. Bentgrasses and Kentucky bluegrasses are listed as tolerant of flooding, fine fescues and annual bluegrass not so. Fusarium is becoming one of the worst diseases on lawns, with no really effective control. There is no solution yet, but research is underway seeking chemical means for eliminating perennial weed grasses in fine turf.

FLORIDA FINDS

The University of Florida today has a comprehensive research program in turfgrass. A few of the more general conclusions may be of interest even to members in the North.

The importance of the various turfgrass species in Florida is said to be in this order: st. augustine, first, then centipede, bahia (west coast especially), bermuda and zoysia. This ranking in spite of the fact that st. augustine requires a lot of attention. Surprisingly zoysia rates low, largely because thatch is difficult to control, in turn making control of billbug and nematodes difficult. Lawn care services are not as familiar with properly maintaining zoysia as they are with st. augustine. Much turf in Florida is maintained by lawn service firms.

Nematodes seem a far more serious pest in Florida than in northern states. Dasinit is an especially effective nematocide, but it is quite toxic, so restricted to turf that is professionally managed. Sarolex, a less toxic substance, is recommended for home use. DBCP and VC9-104 are also listed as "very good" for nematode control. Bahia seems increasingly susceptible to dollarspot and iron chlorosis, and it seems a favorite haunt of the disruptive mole cricket. Dr. Horn feels that Argentine bahiagrass has fewer problems than some of the other species. There has been some response of centipede to fungicidal application.

PRESS KIT ON SCHEDULE

February 10 the Institute's press kit was mailed from Columbus, Ohio right on schedule. Seasonal interest is already high among garden editors, and we anticipate an excellent reception. Because of costs involved the kit will not be monitored by a national press clipping bureau, although we anticipate an occasional pickup from friends indicating use of the material. Included in this issuance was an interest-catching photo of a fine-fescue roof; unfortunately the negative of this was not available to us so that separate prints could be offered.

This spring's kit contained 16 pages, embracing 33 titles, as well as the fescue illustration and the covering letter. Backing up the stories were three reprints, Now Lawns; from the Floral Magazine; The Label's the Clue to Lawn Seed, from Horticulture; and Have a Lawn You Can Play On, from American Home

It is anticipated that this kit, a substantial effort by the Institute, will publicize sponsoring grasses quite effectively.

TECHNOLOGICAL TRAINING UNABATED

Perhaps spurred by current programs for urban areas, a great many vocational or technological training efforts have been underway in recent months. The Institute receives requests frequently for information and especially photographs that can be used in publications such as "Career Opportunities for Technicians and Specialists", a publication of the J. G. Ferguson Company of New York. We suppose that the rising demand for services, and the increasing difficulty in obtaining reliable service, makes such programs worthwhile. It will not hurt that trainees become aware of lawn maintenance and quality lawn grasses.

ALL IN A DAY'S WORK

Often it is the human relations angles that makes life worthwhile. Members may be interested in a typical example of the sort of thing that occurs almost daily at the Institute office. The letter from James Moran was very effectively handled by Mrs. Rush, the Marysville office manager, assuming responsibility during the director's absence.

"I was talking long distance to a friend the other day and he told me he had read an interesting article by you in Flower and Garden magazine on the subject of unpampered turf."

"With three boys, a large dog and what appears at times to be the entire neighborhood in my back yard, I need all the help I can get towards an unpampered lawn. Can you send me a copy of this article or any other information that you feel may be of help?"

James J. Moran.

" --- Dr. Schery is out of the state until sometime next week, therefore I'm sending you a few of his reprints that will help you have a nice lawn, yet enjoy all the neighborhood children, and your big dog! ---"

Mrs. Rush."

RUTGERS PROGRESS

An excellent progress report, by C. Reed Funk and four colleagues, Rutgers University, was issued in March, marked "not for publication". It provides a very interesting summarization of bluegrass breeding techniques, and suggests that there will be a number of exciting bluegrass releases out of the Rutgers breeding program in the years ahead. These releases will be tailored much more exactly to seed production and consumer demands than is possible from random pickup of volunteer plants.

PICTURES CHOSEN

Flower and Garden Magazine has decided to utilize 4 color photographs taken at the Institute to accompany Dr. Schery's story in the summer issue of Flower and Garden Magazine. This is one of the few occasions in which a magazine has felt able to sustain the cost of color illustrations. Some of the same set of photos appeared in the spring issue of Better Turf and Garden magazine, to illustrate a story by Dr. Schery appearing there.

CATALOGUE REQUEST

A seed house in Canton, Ohio requested "a good descriptive piece of literature to enclose that gives a short history of the different bluegrasses, fescues, bents and ryegrasses that are used in the turf industry today." Appropriate reprints were sent with permission to draw upon them, and an offer extended for a custom piece if that would be preferred. It is good to have this information about select grasses funnelled to the consuming public through a catalogue without cost to the Institute.

FLORIDA REQUEST

The Lawn Institute press kit mailing list is enlarging. One editor (from Florida) asked not only for the kit, but for permission to reprint various articles.

INSTITUTE GROUNDS

The Institute test and demonstration grounds in Marysville experienced a very open winter. There was little persistent snow (the office snow blower was not used even once during the winter), and from January until spring turf foliage was exposed to cold and desiccation. As a result all lawns were quite brown through the latter part of winter. Under the circumstances there was considerable frost heaving this year, which may be detrimental to new seedings made late last autumn. It also should provide a more rigorous test of hardiness than occurs most years, and may prove somewhat hygienic in affording less protection to pests as well.

BLUEGRASS AND PRE-EMERGENCE HERBICIDES

Smith and Callahan report in the January, 1969 issue of Weed Science on The Response of Kentucky Bluegrass to Soil Residues of Pre-emergence Herbicides. This work was done in Tennessee. Sod plugs of bluegrass were planted into soil taken at various depths which had been field-treated 10 months previously with the familiar crabgrass preventers. When these preventers were freshly used, there was some reduction of root growth (although this was very little with siduron). Materials persisting in the top 2 inches of soil, and having detrimental effects on root growth included bandane, bensulide and terbutol. Herbicides which leached out of the top 2 inches, but persisted in the 2-4 inch level, causing reduction of root regrowth there, included benefin, trifluralin and DMPA (zytron). Siduron and DCPA (dacthal) leached uniformally through the entire 4 inches of the soil column.

BULLETIN BOARD SUGGESTION

The February 28 issue of Seed World carried a Lawn Institute item from the spring press kit as its "Bulletin Board Suggestion". The story begins, "One of the three fundamentals for an acceptable lawn is fertilization. The other two are fine-textured grass and proper mowing."

LAWN INQUIRIES

A rather heavy schedule of letter inquiries has been received this spring, in response to Dr. Schery being listed as the lawn "answer man" in Better Turf and Garden Magazine. Reply to the specific questions is backed up by appropriate reprints from the Institute files, an extension of Institute influence as well as a public service.

ABOUT POA ANNUA

T. K. Koshy, of England and Canada, reports upon seed formation of annual bluegrass in the January Crop Science. Koshy says that Poa annua is not apomictic, and that seed production is good from either self or cross-fertilization. Annual bluegrass seed ripens even on panicles cut from the plant the day after pollination, important for making Poa annua a "successful" weed.

NITROGEN UPTAKE

A study by Carolina researchers reported in the January Crop Science indicates competition between types of nitrogen taken up by seedling wheat. Ample ammonium slowed uptake of nitrate, and apparently pH and other cations as well have an influence on membrane permeability.

LAWN PRESENTATION GIVEN

Dr. Schery was speaker of the evening at the Columbus Rose Club meeting, Faculty Club, Ohio State University, on February 5. Progress in the seed industry, including development of the many new varieties was discussed. A broad range of grass selections is now available, permitting distinctive blends for almost all types of lawns and natural conditions. Prominent varieties of Kentucky bluegrass and fine fescue were discussed individually, indicating particular compatibilities. Three reprints were distributed to all attendees (Bluegrass/Bentgrass Checks Poa Annua, In Praise of Unpampered Turf, Turfgrass, America's Growingest Crop). Extra reprints were supplied the garden editor of the Columbus Dispatch, who asked if Dr. Schery might later give a similar presentation during the newspaper's "spring garden days".

TIPPING THE ECOLOGICAL BALANCE

Studies by agronomists at the University of California reveal that small nutritional changes can tip the balance between grass or broadleaf competitors. When sulfur content of the soil was low the broadleaf plant (Erodium) was more successful than the grass (Bromus), out-competing the grass. When sulfur was more abundant grass density increased, and (because of its greater height helping shade the broadleaf weeds) increasingly gained ground until the broadleaf was virtually eliminated. It might be assumed that, similarly, small fertility differences in the lawn can tip the balance in favor of grass or weed, or in favor of one grass vs. another.

NEW LAWN AND GARDEN MOVIE

An invitation was received from under secretary Campbell of the Department of Agriculture, to preview a new movie entitled "Color the City Green", a public service feature by Agrico being released to part of the Department of Agriculture's National Lawn and Garden Week celebration. While it was not feasible to travel from Ohio to Washington to review this premiere, members may want to keep in mind the availability of a new film devoted to lawn and garden projects. We often have inquiry from gardening groups about availability of such a film.

SOIL AMENDMENTS IN THE SOUTH

Experiments at the University of Georgia indicated that the use of milled pine bark as a soil amendment, to reduce compaction and increase porosity, markedly increased salt concentration, especially at boundaries where incorporation terminated. Whether pine bark was utilized or not salt concentration increased as compaction pressures increased, especially between 20 and 40, and 40 and 60, psi.

MORE ON ARTIFICIAL GRASS

The Garden Supply Merchandiser, February issue, contains a review of "Man-Made Grass Making Inroads". The article predicts that in spite of high costs ($2.00 - $2.50 per sq. ft. at retail) that artificial grass will dominate football fields in the not too distant future, and is making inroads for golf greens and tees. It is indicated that DuPont will join Monsanto and 3M in producing artificial turf.

FINE FESCUE RESISTANT

Wayne Morgan, reviewing the Agronomy meetings for his Kellogg newsletter, mentions that studies in Mississippi for the control of Poa annua with pre-emergence crabgrass preventers, showed that Dacthal inhibited Poa trivialis and ryegrass but not fine fescue when these grasses were used for winterseeding. Balan did not damage any of the wintergrasses, but Betasan injured all. Here is a good argument for the use of fine fescue in winterseeding blends, in a tandem with one of the best proven pre-emergents.

DETECTION OF LAWN HERBICIDES

Researchers at Rhode Island report upon Bioassay For Bensulide, DCPA and Siduron in Turfgrass, in the January issue of "Weed Science". A number of plants were evaluated as indicator species, most of them working satisfactorily as such. Several of the species were more sensitive indicators than is crabgrass. Using appropriate indicator species for confirmation bensulide proved to move down the soil column to a considerable degree, but siduron very little. DCPA was intermediate. Siduron did not persist to any great degree. All 3 herbicides moved only slightly in the soil profile when used a normal rates. Encouragingly, the researchers find, "Although chemicals were applied for 4 years, there appears to be no accumulation in the depth ranges tested over that found from a single annual application."

MICRONUTRIENTS USEFULNESS

Except very locally, it is difficult to find documented evidence for the usefulness of micronutrients (except iron, in alkaline soils) for turfgrass anywhere in the country. It is thus interesting to note that William Haven, Superintendent of Greenbrier (White Sulphur Springs), mentions response on the greens from boron, copper, molybdenum and magnesium. Applications were suggested by soil test, and Haven purports to note visual response (darker, healthier grass). This was reported in the February Golf Superintendent, and although not a case of scientific documentation, represents one of the few cases where benefits are reported to turfgrass from micronutrient application (other than iron).

POA ANNUA DOCUMENTED

An independent survey taken for Elanco, on how Poa annua is regarded by golf course superintendents, is reported in the February Golf Superintendent. Ninety-five percent of the courses have Poa annua, and 80 percent of these consider it a problem. Irrigation intensifies Poa annua, and 56 percent of the superintendents considered grass weed control the worst problem, 70 percent indicating Poa annua the most difficult of the weed grasses. Only 15 percent of the superintendents feel they have been successful in eliminating Poa.

IRRIGATED MERION LOSES POTASSIUM

Dr. P. E. Rieke of Michigan State University reports in Better Crops with Plant Food on tests in northern Michigan where Merion bluegrass was planted to a sandy soil. All plantings received 2 lbs of potassium annually, those not receiving irrigation retaining about 250 lbs/A and those irrigated dropping below 100 lbs. On such a soil obviously irrigation leaches potassium rapidly.

NEWSPAPER PICKUP

Without a clipping service monitoring pickup of press kit stories by newspapers, figures on usage are impossible to obtain. It is gratifying, however, to run across Institute materials in the gardening section of newspapers. We chanced to note in the St. Louis Post Dispatch, March 14, 1969, utilization of 2 stories, with "Seed Blend Important to Lawn" featured (given a byline and a total of 45 column inches space).

IN LAWN GARDEN OUTDOOR LIVING

The review of lawngrass varieties prepared for the December issue of Grounds Maintenance, reprinted and circulated to members, appeared (with permission) also in the February issue of Lawn, Garden and Outdoor Living. Both magazines are out of the Intertec Publishing Corp., Kansas City. We are glad to have this additional coverage, especially in that the same offer is extended in Lawn, Garden and Outdoor Living as in Grounds Maintenance, viz. "The Lawn Institute --- will provide a reprint giving thumbnail sketches of varieties on receipt of a self-addressed, stamped envelope." Numerous requests at practically no cost to the Institute were honored by the first offering, a sequence being repeated following appearance of the February issuance of Lawn, Garden and Outdoor Living.

CHANGING OPINION?

The "conventional wisdom" in turfgrass research circles has consistently maintained that loss of turfgrass, especially in late spring, is due to low carbohydrate reserves, and that this deficiency is intensified under high nitrogen fertility. Now we note the report by Professor Sheard, University of Guelph, Canada, in the December Crop Science, showing that with timothy, at least, spring growth is negatively associated with fructose concentration. Also, there was a positive correlation between spring growth and nitrogen. The report suggests that an internal source of nitrogenous materials for rapid synthesis of new protoplasm may be of greater importance than carbohydrates.

PESTICIDE INFLUENCE

The ramifications of a single application of pesticide (in this case the insecticide, Sevin) is detailed by G. W. Barrett, in the Autumn, 1968 issue of Ecology. Identical, side-by-side areas were compared, the one sprayed, the other not. Not only was there immediate influence on organisms sensitive to the spray, but ramifying effects continued for many weeks. For example, decomposition of litter (in a lawn would be thatch) was halted until new populations of organisms built up. Eventually conditions returned very much to normal, but in the interim there were many side-effect disturbances.

MATERIALS TO EXTENSION

In keeping with usual practices, supplementary press kit enclosures were forwarded to the central extension service in the states of Massachusetts, Iowa and Colorado. These three states in particular have requested supplementary materials for forwarding to county agents in urban areas. We are delighted to have this extra use made of press kit materials.

POTENTIAL NEW SEED MARKET?

We have followed the increasing interest in no-tillage corn. This is corn planted into sod that has been killed with a herbicide, without plowing. Yields are usually as good or better than with cultivation, and there is conservation of soil and moisture. Virginia researchers discuss this in the February Agricultural Chemicals.

The authors, Moschler and Shear, have this to say about the sod into which corn will be cropped: "Both perennial and annual sods are suitable mulches for no-tillage corn. Perennial sods include orchard grass, tall fescue, bluegrass, and mixtures composed predominately of these --- with clovers or annual lespedeza. --- Rye is the best annual winter cover crop --- because of its ease of establishment, winter hardiness, ease of killing with chemical herbicides, and persistence of the dead mulch. --"

If the no-tillage practice becomes commonplace, a new and expanding market should develop for turfgrass seeds.

INSTITUTE PHOTOS IN DEMAND

The first of the year quite a series of requests for Institute photos developed, for books, leaflets and magazines. In all cases the Institute receives credit, in addition to facilitating the flow of information concerning fine turfgrasses. Among requests handled in a single day were the University of Wyoming, a publisher in Ontario, Canada, one in New York, and Flower and Garden magazine. A strong photo file is an excellent way to gain public interest.

DEPTH OF GRASS ROOTING

Roots of understory plants were followed by radioactive tracing techniques to show depth of root penetration, in a Montana study reported in the autumn issue of Ecology. Perhaps a clue to the depth to which grass might extend in a lawn under trees, is that a native fescue (Festuca scabrella) was found to penetrate as much as 60 inches deep (in 11 percent of the cases); the majority of roots were in the top 6 inches of the soil, however.

IN THE BULL SHEET

The March, 1969 issue of the Bull Sheet, official bulletin of the Midwest Association of Golf Course Superintendents, carried the Institute story (with byline) "Don't Scalp Bluegrass, Fescue". The story opens, "Misguided mowing in spring can be hard on that beautiful Kentucky bluegrass-fine fescue lawn. -- Abundant nitrogen stimulates green leaf, and food resources are mostly 'in the leaf' rather than stored below ground as in winter. -- Scalping the coarse grasses before overseeding with a fine-textured lawn blend should upgrade composition of poorish lawns."

DICAMBA DISSIPATION

A study by Hahn et al reported in the January Weed Science confirmed that phytotoxicity of dicamba was greater in sandy as compared to heavier soils, and that dissipation was slower in the subsoil than in the topsoil. It was not especially sensitive to decomposition by sunlight. Dicamba was more toxic under acid than under near-neutral pH conditions.

EXCELLENT WEED BOOK

Weeds of the Southern United States is an early 1969 issuance financed through the Federal Extension Service. A copy was received here through Dr. Kates of Virginia Polytechnic Institute. Much of the compilation work was done at the University of Georgia. Forty-two pages containing 3 fine color photographs per page of familiar weeds are included. The booklet lists the weeds according to the family in which they occur, and the families are listed alphabetically. Both the latin and the common name are given, and a brief description, but no indications of control. The weeds are not particularly those of the lawn or garden, many being nursery and field species. But the fine photos offer a simplified means for checking out weeds which the botanically-untrained frequently see but can't identify by name.

COMPOSITION IN BUILDINGS MAGAZINE

The Institute was delighted to have editor James Cable of Buildings magazine compose a story for the February issue from tidbits furnished in the press kits. We are grateful, too, for credit and mention of the Lawn Institute, which should help project our image in the building trade. Copies of the story were circulated to members, who will recall it dealt chiefly with spring activities. Typical quotes -- "Kentucky bluegrass, fine fescue and Highland bentgrass all pick up fertilizer nutrients adequately -- from a soluble foliar fertilizer", "Improve the effectiveness of pre-emergence crabgrass preventers by accompanying them with fertilizer --".

GRASS FOOD RESERVES

Studies in Missouri reported by Dahlman and Kucera, Ecology, Autumn, 1968, show that food manufactured by the plant is at least 85 percent retained after 8 weeks, and that it accumulates in the underground storage organs of the grass late in the growing season. Radioactive carbon dioxide was introduced under a plastic tent, and was utilized in normal photosynthesis by the grass. At least half of the manufactured food seemed to be translocated immediately to the roots; of course the more actively growing leaves accumulated more than do those growing slowly.

SPRING ADVISORY

A story done for Flower and Garden magazine, to appear in summer, deals with some of the problems encountered then. It was suggested to editor Snyder that the best way to forestall some of the summer problems was to do the proper thing in spring. The result was "A Stitch in Time", appearing in the March issue of Flower and Garden magazine. This one page insert was reprinted for distribution to members. It covered spring fertilization, weed control (including weed-and-feed) and mentioned "These herbicides do not injure Kentucky bluegrasses, Oregon fine fescues, Colonial bentgrasses, nor stalwarts of the upper South --" Crabgrass preventers were listed, thatch removal mentioned, and proper mowing heights related to kind of grass and variety.

PARK MAINTENANCE TURF ANNUAL

The Institute received from Eric Madison his annual request for summaries and reports concerning turfgrass. The Institute is cited as a reference in the Turf Annual, appearing each summer in Park Maintenance. We are pleased to send editor Madison all press kit materials and reprints issued during the course of the year.

TURFGRASS RESPONSE TO FERTILIZER

King and Skogley, Rhode Island, report in the January Agronomy Journal on the "Effect of Nitrogen and Phosphorus Placements and Rates on Turfgrass Establishment". From time to time it has been indicated that placement of the fertilizer tends to encourage one species over another when bluegrass and fine fescue are planted together in mixture, and that nitrogen tends to encourage the bluegrass at the expense of the fescue. In this particular research no really significant difference was found, although (in autumn) nitrogen placed at or near the surface provided a better initial "push" for the seedlings; the influence soon fell off shortly. As would be expected, higher rates and more frequent application benefited the turf. Under the circumstances of these tests neither the placement of the fertilizer nor the percentage of the nutrients had much effect upon the respective frequency of the two grasses.

IN GARDEN SUPPLY MERCHANDISER

The April issue of Home and Garden Supply Merchandiser carried in Institute pickup citing the Lawn Institute several times. The story dealt with fertilizers suitable to today's fine-textured lawn. "One of the three fundamentals for an acceptable lawn is fertilization (the other two are fine-textured grass and proper mowing)".

NITROGEN EFFECTS ON BENTGRASS, BLUEGRASS

Green and Beard, Michigan, report in the January, 1969 Agronomy Journal on the influence of a series of nitrogen rates on sugar content of creeping bentgrass and two Kentucky bluegrasses. Sugars of higher molecular weight were encouraged by high nitrogen treatment.

GRASS FERTILIZER RATIO

Burton and colleagues report upon tests with coastal bermudagrass under differing fertility ratios. Omitting P and K reduced yields appreciably, but there was no advantage to increasing P and K more than to a 4-1-2 ratio. On an elemental basis it appears that bermudagrass profits from more than 4 times as much N as P, and more than twice as much N as K.

MICHIGAN PATHOLOGIST

Dr. Vargas, from the University of Minnesota, has been appointed as turfgrass pathologist at Michigan State University. This rounds out about as complete a staff of turfgrass researchers as exists anywhere in the country.

"WHAT THEY ARE SAYING ---"

"Please send me one of your pamphlets."

T. Tacca
E. Brunswick, New Jersey

"I would like very much for you to send me some information I need --- about lawns and turfgrass."

Carl R. Filbrandt, Jr.
South Haven, Michigan

WHAT THEY ARE SAYING:

"I read your letter with great interest, and I plan to run an article using your material 'Highland Bentgrass and Bluegrasses' in the near future. -- Thank you once again for the material."

Richard Trevarthan, Editor
The Bull Sheet

"We will soon be putting out the Wyoming Lawn Handbook -- a popular-type publication for distribution to Wyoming homeowners. The enclosed pictures have been clipped, I believe, from one of your publications. May we use these illustrations in the Syoming Lawn Handbook? -- Thank you very much."

Mrs. Gaydell M. Collier
College of Ag., University of Wyoming &
U.S. Department of Agriculture

"Many thanks for the photo and the reprints. Turfgrass management is certainly one of the most difficult areas in which to find photographs. I do appreciate your cooperation."

Mrs. Sybil Kaufman, Photo Research Editor
J. G. Ferguson Publishing Company

"Thanks for the sheets from the Press Kit. Please keep me advised if we may be of help with additional equipment."

J. R. Watson
Toro Manufacturing Corporation

"I have just looked through the spring press releases from 'The Lawn Institute' and find them most interesting."

Gordon Newton
Northrup, King and Company

"I am trying to keep up with new developments and know-how. I would be most grateful for any literature that you may be able to send me."

Andrew J. Smoley
Whitaker, Pennsylvania

"We would appreciate receiving 50 copies of your recent article 'New Lawn Seeds Ready to Sprout Profits'. This is a very good article, Bob, and we will put them to good use."

Roy A. Edwards
W. R. Grace and Company

"Please forward me information about the Better Lawn and Turf Institute. What services are available, cost of membership, if any, and requirements?"

Thaddeus J. Kuczewski, Coop Extension
Bristol County, Massachusetts

"I am a student attending American River College, Sacramento, California, majoring in Ornamental Horticulture. I am especially interested in turfgrasses as they apply to golf courses and landscaping. -- Might I have a reprint giving thumbnail sketches of the varieties? -- many thanks."

E. A. Weiss, California.

"Thank you for your letter and articles -- Looking forward to your late summer article on overseeding for our area."

Ray Jensen, Southern Turf Nurseries.