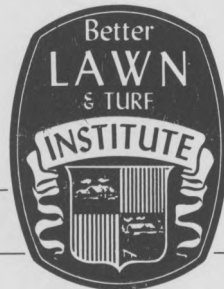


# BETTER LAWN

PUBLISHED PERIODICALLY BY THE NEWS BUREAU OF  
BETTER LAWN & TURF INSTITUTE



## Harvests

ROUTE 4, KIMBERDALE

MARYSVILLE, OHIO 43040

Volume 13, No. 1

April, 1966

### ANNUAL MEETING DATE SET

President Mangelsdorf has tentatively set Tuesday, May 24, for the Lawn Institute annual meeting (Board meeting), at the Kansas City Club in Kansas City, Missouri. Final details and agenda will be sent Board members shortly before meeting time. It is anticipated the meeting would get under way about 9:30 in the morning, extend through luncheon and terminate about mid-afternoon. President Mangelsdorf extends a cordial invitation for all members to attend, and asks that Board members especially mark this date on their calendars. If you will let the Marysville office hear of your plans, reservations can be made for you at the Kansas City Club.

### LAWN SEED STORIES

Appearing in the first quarter of the year or currently in press were the following stories, featuring lawngresses represented by the Institute:

- "Quality Bentgrass Proves Compatible With Bluegrass In 4-Year Turf Tests" -  
Lawn/Garden/Outdoor Living
- "Start Your Lawn Planning Now" - Resort Management
- "The Latest News About Lawns" - Horticulture Magazine
- "Lawn Seed And Lawn Weeds" - Seed World
- "Common Sense Lawn Care" - Flower Grower
- "Lawns In Landscaping" - Quality Courts The Reporter
- "Buying Seed For The Roadside" - Proceedings of the 24th Short Course on  
Roadside Development
- "Lawns And The Water Shortage" - Seed World
- "Why Not Bentgrass Blends?" - Golfdom
- "Lawn Zip And Zoom" - The Gardener
- "Spring Lawn Seeding" - Seed World
- "Looking To Turfgrass Quality" - 1966 Wisconsin Turfgrass Conference
- "The Lawn Seed Industry Grows Up" - Crops & Soil
- "Lawn Weeds" - Resort Management
- "Good Seed Makes Good Sod" - Massachusetts Turf Bulletin

### SEED DONATED TO GARDEN CENTER

With the help of President Mangelsdorf, small samples of the following varieties were sent the Goldsmith Civic Garden Center, Memphis, Tennessee, for trial and demonstration.

Merion Kentucky bluegrass  
Natural Kentucky bluegrass  
Park Kentucky bluegrass  
Arboretum Kentucky bluegrass  
Pennlawn fine fescue  
Illahee fine fescue  
Chewings fine fescue  
Kentucky-31 tall fescue  
Tall fescue mixed with bluegrass, about 3/4-1/4  
Highland Colonial bentgrass  
Penncross creeping bentgrass

The plantings are being made to plots 15 feet by 30, to fumigated soil. This should give these northern grasses some protection against weeds, and it will be interesting to hear of their abilities so far south with this added help. Suggestions on care have been sent the horticulturist, along with informational sheets on bluegrass, fine fescue and bentgrass.

#### BENTGRASS INFORMATION

A story prepared for Lawn/Garden/Outdoor Living, utilizing data developed on the Lawn Institute grounds, appeared under the title "Quality Bentgrass Proves Compatible With Bluegrass In 4-Year Turf Tests." Through circulation of the story to members and others, it should be possible to lend Highland bentgrass a hand to refute some of the "smear" publicity that oftens comes from volunteer bentgrass in eastern lawns.

#### PHOTOS REQUESTED FOR HORTICULTURAL SOCIETY BULLETIN

"For our monthly BULLETIN, we are often in need of photos to illustrate articles, and I am hoping that perhaps you will be able to supply some. - - Thank you for your attention." - Tom Powell, Editor, The Horticultural Society of New York, Inc.

#### WISCONSIN TURFGRASS CONFERENCE

The Wisconsin 1966 Turfgrass Conference encompassed an intensive day and a half. General sessions opened the afternoon of March 22, with Dr. Schery the first speaker on "Care And Performance Of Turfgrass Varieties." There followed discussions in depth on "Winter Injury And Winterkilling" by Dale Smith of the Agronomy Department, "Potash And Its Effect On Winter Hardiness Of Grasses" by Dr. Wagner, Director of the American Potash Institute; and a research report on management and fertilization of Merion Kentucky bluegrass by Jerry O'Donnell, graduate student in the Soils Department at the university.

The evening banquet was highlighted by a speech on Wisconsin wildlife. Workshop sessions on Wednesday morning proved very effective in give-and-take discussions concerning (1) Weeds & Herbicides, (2) Diseases & Fungicides, (3) Soils & Fertility, and (4) Turfgrass Seed. The approximately 150 attendees were broken up into four groups, and progressively moved from room to room where each of these four topic areas were covered through a presentation by staff members followed by audience discussion.

The afternoon was again devoted to auditorium presentations, on equipment, the sod industry, winterkilling of greens, and plant and sod inspection. It is planned that summaries of all presentations will be included in the Proceedings, to be mailed to all registrants.

Information imparted in the various presentations is likely not new to Institute members. Dr. Schery stressed that it is easy to pick out the most important species - the Kentucky bluegrasses, fine fescues and bentgrasses - but exceedingly difficult to say which is the "best" variety within the species. The latter depends very much upon personal preference, and ability to supply what that particular variety needs in the way of local environment. Ratings by experts in the states adjacent to Wisconsin were detailed for what they might be worth.

Various aspects of fertility were focal point of the remaining presentations on the first day. To judge by reports, the trend is to greater amounts of potassium in mixed fertilizers as compared to phosphorus. On the oxide basis Wisconsin is suggesting about a 3-1-2 ratio for bentgrass, a 3-1-2.5 basis for Kentucky bluegrass. These ratios are arrived at by determining the average balance of these nutrients in the grass (including the roots). An interesting new approach is being used for determining where roots are most active in obtaining nutrients, by the use of radioactive phosphorus introduced at a variety of positions in the root zone. As might be expected, the weight of roots is not a clear indication of ability to absorb nutrients; the slender feeder roots near the tip are more active, though weighing considerably less than roots near the base of the plant.

In the workshop sessions, that session on turfgrass seed fitted very nicely with Institute objectives. In fact, a number of charts prepared by the Lawn Institute (for the Seed World story) were used by Dr. Rohweder in his explanations of what constituted quality. We are delighted that Institute reprints in this general subject area will accompany mailing out of the Proceedings to registrants. Northrup, King mixed seed boxes were utilized as examples (of quality seed) in the demonstration, and it was rewarding to have displayed thereon the Lawn Institute Seal of Approval.

Workshop sessions devoted to soils emphasized particularly the difficulties encountered in water (and nutrient) movement where layering of any type occurs - whether coarse, such as sand; or whether fine, such as of clay or organic materials. Soil chambers indicated clearly the inability of water to penetrate well where these discontinuities occurred.

Technical sessions on diseases and fungicides were wide-ranging, technically complicated. Dr. Worf feels that leaf spot (*Helminthosporium*) is the worst disease in Wisconsin, and particularly likes Merion because of its resistance. But he does recognize the mildew and rust susceptibility of Merion, but doesn't feel striped smut is likely to be of much importance in Wisconsin. The varying incidence of disease backed up Dr. Schery's statement of the previous day that a strong case could be made for mixtures, and for not concentrating on a single variety.

Drs. Newman and Cole felt that herbicides were generally adequate to handle broad-leaf weed problems these days, now that Dicamba is available, backed up by Silvex and other members of the 2,4-D family of herbicides. He lamented, as do all turf authorities, the lack of any selective means for handling coarse perennial grasses. Apparently, weed problems and herbicide rates are about standard in Wisconsin as for other parts of the Midwest.

It may be of interest to members that Ben Warren ("Views Of The Sod Industry") in the afternoon sessions suggested that the most important matter in the years ahead for the industry is procuring high quality seed of ever better varieties. He feels that Merion has been the single biggest boon to the sod industry, but that now newer, more specialized sod varieties are due. Perhaps the lawn seed industry is approaching a stage somewhat similar to the constant introduction of new selections of annual flowers and vegetables? Warren was emphatic in his condemnation of sale of grass varieties not sufficiently and widely enough tested by independent (experiment station) researchers. He lamented that one such privately introduced and widely advertised variety stood a good chance of injuring the sod industry's reputation for progressiveness and quality.

#### LAWN MARKET RECEIVES CONTINUED ATTENTION

Winter saw no dearth of the inquiries the Lawn Institute receives, usually by telephone from New York, for a "market analysis" in the lawn products field. We look upon these calls as a sort of bellwether for merchandising interest. Many calls are merely from advertising agents, seeking free information which they can consolidate for a presentation to their clients. Occasionally, product people call, such as the J. M. Huber Corporation, purveyor of peat products considering enlargement of its present product line. Such inquiries are provided the courtesies of general information on the telephone, followed by the mailing of reprints (to serious inquirers) that should help publicize the Lawn Institute name as well as provide background information on quality lawn seed and grasses. Some inquirers are willing to pay costs for sending a book and reprints, as with Corplan Associates, Chicago, a call received the same day as the Huber one.

#### DR. SCHERY SPEAKS TO CLUB

Dr. Schery was invited speaker to the Columbus Rose Club dinner meeting, March 2, speaking on "A Green Carpet Lawn." "Quality Lawns For Fine Roses," "Quick Spring Greenup," and "The Latest News About Lawns" were distributed to all in attendance. Included in the group were many prominent Columbus people, including professors and administrators at Ohio State University.

#### LAWN STORY TO MOTELS

An Institute story prepared for Quality Motels Reporter appeared in the March issue under the title "Lawns In Landscaping." The magazine is sponsored by the Quality Motel chain. The April issue is expected to carry a summarizing chart, as a follow-up.

#### DEPARTMENT OF COMMERCE CLEARINGHOUSE

The Lawn Institute was invited by the Department of Commerce to inform the department's Clearinghouse about possible services. Instructional materials, including items of value in libraries, were requested. The listing will appear in various publications designed to acquaint the states with informational sources.

#### WISCONSIN RECOMMENDATIONS

George Ziegler's advisory on home lawns for Wisconsin (Circular 445) suggests the following seeding mixtures: sunshine - 4 parts Kentucky bluegrass with 1 part redtop or ryegrass; with partial shade - Kentucky bluegrass 60%, fine fescue 30%, ryegrass 10%; poor soil - fine fescue 90%, *Poa trivialis* and redtop 5% each; under trees - fine fescue 60%, Kentucky bluegrass 30%, ryegrass 10%.

#### GOLFDOM STORY APPEARS

Dr. Schery's "Why Not Bentgrass Blends?" appears in the March issue of *Golfdom*. The story was slanted to the seeding of fairways, suggesting that a basic Highland bentgrass planting could be supplemented with small amounts of fine fescue and bluegrass. In fact the subtitle reads "Including fine fescue and bluegrass in seedings can contribute seasonally to the turf's beauty, and is economical." A Highland bentgrass-fine fescue planting on an Oregon golf course fairway is pictured, as are close-ups of Penncross and Highland plants. Reprints of the story have been offered members.

#### SEEKS INSTITUTE BRIEFING

The magazine *Farm Technology*, publication directed to county agents, contacted the Institute for background materials appropriate for presenting the "lawn story" to the urban county agents. Dr. Schery talked with Editor Ruth Kingsley over the telephone, and considerable literature was sent to the magazine. It is planned to have an informational issue on lawns and ornamentals, which Dr. Schery has been asked to review before publication. This will prove an excellent medium for informing county agents about quality lawn seed.

#### FROM THE BLUEGRASS STATE

The dean of bluegrass sponsors, Dr. Ernest Fergus of the University of Kentucky, recently wrote complimenting us on the spring press kit and the tremendous disappearance of bluegrass seed that he feels the Lawn Institute is at least partly responsible for. Dr. Fergus reported that he had word of bluegrass being used for permanent turf in Florida, - could it be? We believe not, and that word is filtering back to Kentucky of winterseeding use. Dr. Fergus asks, "anything you can tell me about the usage will be appreciated - - I am sure that the thoroughbred farms down there would be delighted to have pastures of Kentucky bluegrass and would go to great expense to get it."

#### RUTGERS OPINIONS

Agricultural Chemicals reports that Rutgers found Diazinon, Trithion and Ethion as still useful for chinchbug control on turfgrass, but that chlordane had become ineffective. Aspon and Dursban are promising new insecticides.

#### INSTITUTE SUPPORTS PUBLICATION

Dr. Glen M. Wood, University of Vermont, prepares articles on growing lawns in his area from time to time. Recently he requested supporting photographs from the Institute, which of course were sent him. Credit is given the Institute.

#### MEMBER DISTRIBUTES REPRINTS AT FLOWER AND GARDEN FESTIVAL

We are grateful to member Kellogg Seed Company for distributing 300 reprints of "Start Your Lawn Planning Now" to the Milwaukee Midwest Flower and Garden Festival.

#### WEED SOCIETY OF AMERICA PROGRAM

The 1966 annual meeting of the Weed Society of America reflected in its program the maturing of weed work from trial-and-error chemical applications to considerable basic research having to do with the physiology of plants. Section VI - "Ecological, Physiological And Edaphic Aspects Of Weed Control" particularly concerned itself with investigations as to how certain chemical configurations interfere with internal workings of the cell (including photosynthesis) so far as these are understood. It would be hoped that from this type of approach, eventually generalizations will come, enabling chemists to pinpoint a particular chemical structure to achieve specific or selective aims. Heretofore, development of herbicides has been generally hit or miss, with tremendous and expensive screening programs that uncover very few useful chemicals.

It is especially interesting that researchers are beginning to find that light rates of certain herbicides such as simazine can be mildly stimulative, the heavier rates lethal. Also, as more accurate assays are developed, obscure changes in the ecological balance of the soil, and in persistence of herbicides earlier thought quickly dissipated, are showing up. Such investigations will not only lead to better understanding of toxic build-up in the soil, but may enable control of the chemical quality of the plant itself. A reciprocal effect is that plant physiologists are learning more about the specialized cycles in plant physiology utilizing herbicides as a tool for blocking certain reactions.

A great deal more information is accumulating on movement of herbicides in the plant, and the conditions under which they are translocated most. Availability of herbicide with radioactive carbon tracers has been highly effective in clarifying this aspect of herbicide performance.

#### SOME THOUGHTS FOR LAWN SEED MERCHANTS

In his speech as retiring President of the American Horticultural Society, Dr. Seibert touched upon a couple of matters that stare us in the face every day, but are seldom given a second thought. Both lead not only to sales of lawn products, but to national civic betterment.

First Seibert called attention to the many retirees now on the American scene. These are people forced from active work at a time when they are mature of judgement, filled with general knowledge, affluent enough for leisure. They are desperately looking for ways to employ their talents. What better devotees

of lawn and garden? Maybe industry should make more effort to interest them in the joys and intricacies of lawn tending?

Secondly, in a confusing world, where many of our national and international activities seem questionable, and the average man is frustrated by his inability to do much about it, where is there reprieve from the confusion than in the garden? Siebert writes, "Horticulture is a means of preserving the sanity of mankind. - - it figures in the everyday lives of more individuals than most of us realize. - - release from the tension and worries - - no age limit - - no demand for social or economic status - - no sex barrier - - equally important to man, woman and child - - all races, colors, creeds, languages and nationalities - - no national borders." Was there ever a broader market, or a more worthwhile one if it can "contribute" towards world peace and maintaining the sanities of mankind?"

#### INQUIRY FROM THE TROPICS

Gramaslindas, Cia., purveyors of sprigs and sod in Puerto Rico, inquired recently of the Institute about bahiagrass seed. Of course northern species are inappropriate for the Caribbean, though information on winterseeding was sent. It is flattering that turfgrass interests so removed as Puerto Rico look to the Institute for sound information!

#### LAWN GRUB CONTROL

Late in 1965 two research circulars (No. 140 and 141) were issued by the Ohio Agricultural Research and Development Center, having to do with soil grubs. Both publications are by Dr. J. B. Polivka. The former is entitled "Effectiveness Of Insecticides For The Control Of White Grubs In Turf," the latter "Effectiveness Of Insecticides Applied To Turf To Destroy Japanese Beetle Larvae."

In both instances, Dr. Polivka feels that the chlorinated hydrocarbons are quite effective and very long lasting in the soil, as a preventive against grubs of all types. The formulation applied is not of any great consequence, but total concentration of the insecticide is. Initial kill may be erratic until the insecticide is thoroughly dispersed, but thereafter control is 100% almost indefinitely - usually ten or more years.

The net impression is a boost for chlorinated hydrocarbon insecticides (ranging from Aldrin to Toxaphene), which have fallen into some disfavor for above ground usage. These and other materials such as lead arsenate and Zytron offer nearly complete insurance against grubs, and a long-lasting residual effect in the soil.

#### NEW MISSOURI TURFGRASS PROGRAM

The Turfgrass Council, newly formed for Missouri at the last Turfgrass Conference, swung into action in January. One of the preliminaries was an estimate of turfgrass acreage and its importance in the state. Dr. Hemphill of the University of Missouri, co-ordinator for the program, called the Lawn Institute for help. Unfortunately, there has been no statistical pinpointing for the state, and the best we were able to provide was from extrapolation of national figures and those reported for other areas.

#### RELATIVELY LITTLE KNOWN ABOUT SEED DORMANCY

A series of papers at the Weed Society of America annual convention, emphasized how little we really understand conditions affecting seed dormancy. High sums are spent on herbicidal control after a weed seed has sprouted, but next to nothing is done to understand and control the weed seed populations in the soil.

Studies at Iowa State supported laboratory findings, that weeds such as foxtail are susceptible to fumigation, more so than some broadleaf weeds. As would be expected, dormant seed was less affected than non-dormant.

Other work at Iowa State dealt with reasons for such seed not sprouting or sprouting only after certain delay in the soil. Apparently the amount of oxygen present is influential: when weed seeds are very abundant, the total oxygen may not be sufficient to "go around," but the same amount of oxygen would permit sprouting if there were fewer weed seeds present. There also seemed to be inter-relationships with carbon dioxide. About 3% carbon dioxide seems stimulative, while heavy concentrations can be detrimental. It is theorized that summer dormancy of such weeds as foxtail could even be due to carbon dioxide resulting from microorganismal activity in the soil seasonally.

#### ABOUT CRABGRASS

Investigations at Purdue showed that root residues of foxtail and crabgrass were repressive to corn. And in Connecticut there's abundant evidence that continuing use of atrazine so favors crabgrass (which is not well controlled by the herbicide), that crabgrass populations build up in corn fields sufficient to reduce yield, and create a huge reservoir of crabgrass seed in the soil. Thus in a sense atrazine treatment is self-defeating, and may carry implications for use in southern lawns.

#### GRASS WINTER HARDINESS

Dr. James Beard, Institute advisor for Michigan, published an excellent summary on "winter injury" in the January The Golf Course Superintendent. Purveyors of fine-textured grasses may find "sales talk" in such facts as:

Bentgrass and Kentucky bluegrass are Nos. 1 and 3 among the most hardy species. Fine fescue is 5. Tall fescue and the ryegrasses rate rather poorly.

Peak hardiness is in December, and is especially reduced in early spring, when sudden freezes can be critical. Bents and Kentucky bluegrasses are little bothered by this threat. Neither are they much bothered by as much as two months under ice.

With all species there is greater chance of winter injury if fertilized and forced into growth late in autumn. Newport is one of the least hardy of the bluegrasses, presumably because of its late-season growing habits. Excessively wet turf may also kill more easily through winter, as might that heavily thatched (toxic decomposition products from the thatch). As would be expected, low-cut turf chances more injury than the better insulated higher-mowed turf.



### BLUEGRASS IN FLORIDA?

It was stretching things quite a bit, but the February issue of Ford Times carried an item "Visit Florida's Bluegrass Country." The story had to do with thoroughbred horse racing in the Ocala area, and it is unlikely there is any bluegrass in the pasture unless some might be annually seeded as a component of wintergrass. Even though the information is not correct, it does serve to emphasize the magic of the bluegrass name when it comes to horses. The lead sentence from one section of the story reads: "The seldom-visited country around Ocala has become a beautiful land of bluegrass." In all probability the fields pictured were bahiagrass.

### FLORIDA WINTERGRASS

Chan Baker sends end-of-March comments on a number of Florida seed happenings, including wintergrass seed mixtures. He writes "Your Institute winter mixture still looks best down here - - I have a young lad who sells golf courses - - more and more golf men are coming to wintergrasses - - all we need is a little more stimulus - -."

Chan also comments: "Sometimes, we get so inspired with new grasses that we lose sight of the lawn and its attendant care. We are going through a cycle right now with the new hybrid bermudas. (Users) are more affluent (choose these grasses with) ordinary lawn care and neglect and the end results get pretty horrible."

### TRADE PAPER USES INSTITUTE PHOTO

Members may have noticed that the Institute grounds made front page on the March 23 Seed Trade News, under the heading "A Sure Sign Of Spring." Pictured was the Highland bentgrass planting maintained at low cut. Referred to are sections in which Highland is mixed with Kentucky bluegrass and with fine fescue. Dr. Schery is quoted as indicating "Though dominated by the Highland bentgrass, both of these have maintained a dwarf population that helps winter color a bit. I might add that Highland bentgrass has had far better winter color on our test grounds this year than the other bentgrass varieties."

### PAST PREXY VISITS

The Lawn Institute was pleased to have a visit by Russell Lehman, past president of the Highland Bentgrass Commission, who went over matters of mutual interest and checked the experimental grounds March 30. The Highland Bentgrass Commission has been helpful through the years in establishing irrigated demonstrated areas.

### MICHIGAN ADVICE

Institute advisor Dr. Beard, in Michigan Turfgrass Report, Winter 1966, advises the following seeding mixtures:

- A. Sunny areas of medium to low maintenance:
  - Kentucky Bluegrass (Common, Delta, Park) . . . . . 70 to 40%
  - Creeping Red Fescue (Pennlawn, Common, Rainier) . . . 30 to 60%
  
- B. Sunny areas of high maintenance:
  - Merion Kentucky Bluegrass . . . . . 20 to 10%
  - Kentucky Bluegrass (Newport, Common, Delta, Park) . . 50 to 30%
  - Creeping Red Fescue (Pennlawn, Common, Rainier) . . . 30 to 60%
  
- C. Moist, shaded areas:
  - Kentucky Bluegrass (Common, Delta, Park) . . . . . 20 to 30%
  - Creeping Red Fescue (Pennlawn, Common, Rainier) . . . 70 to 40%
  - Roughstalk Bluegrass . . . . . 10 to 30%

PROMISE OF SEDGE CONTROL

Two papers reported upon purple and yellow nutsedge control at the Weed Society 1966 meetings. Work in New Mexico supported some of the findings in Alabama, that sufficient dosages of the arsonates were quite depressive if not entirely lethal. Work at Tifton, Georgia showed EPTC, applied 4 lbs./A 1½ inches beneath the soil surface, to control nutsedge 90-100%.

FINE FESCUE WINTER HARDINESS

Tests at Traverse City, Michigan, reported in the Michigan Turfgrass Report, Winter 1966, indicate appreciable kill of several fine fescue varieties in northern Michigan. There was little or no damage in southern Michigan. High-light fine fescue showed least winterkill, but was poorest in drought tolerance and drought recovery. Pennlawn was the leading domestic variety in all categories, followed by Illahee. Rainier and Creeping Red fescue experienced nearly 50% winterkill. Chewings winterkilled only 14%, but was poorer than Rainier and Creeping Red in drought recovery.

INSTITUTE STORY IN HOME GARDEN MAGAZINE

"Common Sense Lawn Care" appeared in the April issue of "Flower Grower, The Home Garden" Magazine. Under seeding were mentioned important quality lawn species and varieties, and the distinction between "fine-textured" and "coarse kinds" made. Unfortunately, the editors took liberties with the text originally submitted, and the condensations don't always give the complete original intent. It is particularly irritating when copyreaders feel they have to change correct terminology (such as arsonates) to incorrect (arsenates) just because they have never heard of the word! Still, the magazine is important in the popular gardening field, and it is good to have lawns and the top lawngrasses identified in a spring issue.

HISTORY DEPARTMENT INTERESTED IN BLUEGRASS

Dr. Stannard, Professor in History of Science, University of Colorado, recently wrote: "I very much enjoyed your recent paper 'The Migration Of A Plant,'

Natural History - - and profited from it. I am emboldened to ask whether you can spare me a reprint of it, as well as your earlier paper in Economic Botany. I would greatly appreciate receiving them."

#### TURF ANNUAL INFORMATION REQUESTED

Park Maintenance plans again its "Annual Irrigation And Turf Research Section," in the July issue. Editor Madisen has requested from the Institute publications having appeared during the year, which will be reviewed and incorporated where appropriate in the publication.

#### WILD GARLIC HANDBOOK

Agricultural Handbook 298 of the USDA (in cooperation with the Missouri Experiment Station) provides a comprehensive review of wild garlic (and related wild onion), often important in lawns as well as in agriculture. In lawns persistent treatment with 2,4-D in early spring and autumn is probably the most effective attack.

#### PARCEL POST

The American Retail Federation recently solicited the Institute for its support of the newly proposed bills (H.R. 12367 and S. 2843), on revision of parcel post legislation. The new bills call for a slight increase in rates, but do improve standardization and size permissible for many urban areas previously denied the same dimensions permitted rural areas. The ARF feels these bills should be enthusiastically supported, lest legal certification revert to a confusing set of regulations and an even greater rate increase.

#### INSTITUTE STORY IN TRADE MAGAZINE

The February 25 issue of Seed World, carried the by-line story "Lawns And The Water Shortage." Sample statements: "Among the fine-textured grasses, the fine fescues stand out for adaptability to dry, poor-soil conditions. - - mature fescue turfs are especially tenacious in dry shade, where other species do less well. You will find among the fine fescues such varieties as Chewings, Illahee, Pennlawn, Rainier, and Creeping Red." "Nor are Kentucky bluegrasses slouches when it comes to 'sitting out' drought. - - Park and Merion are varieties of Kentucky bluegrass."

#### GARDEN CENTER PROMOTION

Fairview Gardens, Janesville, Wisconsin, ordered 150 of "The Householder's Guide - -" book through the Institute, as give-away promotional items for select customers in the spring gardening season. This follows up on the Institute's appearances before the Wisconsin Nurserymen's Association about a year ago. Books that can serve as something of a permanent reference should be valuable in strengthening the quality lawn seed image.

#### BLUEGRASS REPRINTS FOR LABORATORY

We were delighted to supply "This Remarkable Kentucky Bluegrass" requested by the Osborn Memorial Laboratory of Yale University, and also "The Migration Of A Plant," reprinted from Natural History Magazine.

#### BEAUTIFICATION MOVEMENT

The National Tulip Society communicated with the Institute, asking Dr. Schery to serve upon a committee dedicated to further beautification of America. This "Beautify America Program" may be useful in encouraging lawn planting, as well as planting of ornamentals.

A move is under way to have United States Congress declare the week of October 6, 1966 as "National Spring Garden Planting Week." This is a little late for autumn lawn planting, but will perhaps serve to extend the seasonal enthusiasm.

After the bill is presented to Congress (presumed sometime this spring), members are asked to express their support to their local congressman and senators. It is appropriate that lawn seed participants in and take advantage of beautification publicity, such as seems planned for by the Tulip Society.

#### REPRINTS REQUESTED

One of the side benefits from appearing on turfgrass conference programs is the request for Institute literature to be passed along by people dealing with the public. Following the Wisconsin Conference, request was received from Reinders Brothers, Elm Grove, Wisconsin, distributors of turf equipment and supplies, for multiple reprints on Kentucky bluegrass, fine fescues, and bentgrasses, as well as "How To Select The Right Turfgrass."

#### CONTINUED LAWN PUBLICITY

Dr. Williams, of the Los Angeles County Department of Arboreta and Botanic Gardens, indicates that the annual "Operation Green Carpet" will continue for the 4th Annual Spring Home Lawn Exposition at the Los Angeles State and County Arboretum. There has been impressive publicity and consumer acceptance of this annual display and demonstration. Emphasis this year will be on installation and operation of sprinkling systems, with follow-ups on the planting of new lawns. Movies and commercial displays back up the on-the-spot demonstrations. Inquiries are invited. The exposition will be Saturday and Sunday, April 16-17, from 9 A.M. to 5:30 P.M. Here is further evidence of how important lawns have become to modern-day living in America.

#### UNIVERSITY REQUESTS INSTITUTE LITERATURE

Dr. C. Fred Gerlach, Landscape Architecture, The Pennsylvania State University, recently requested of the Institute: "Several publications of your Institute have been brought to my attention by Professor Wayne H. Wilson who is the Head of this department. - - I expect to use these materials in preparing for courses

I teach involving plant materials and planting design. Thank you very much." The Institute was happy to send Dr. Gerlach a complete set of its reprints and pamphlets.

#### ENCOURAGEMENT FROM AN AUTHORITY

Geoffrey S. Cornish, well-known golf course architect from Massachusetts, kindly took time to comment upon the Institute story placed in the March issue of Golf-dom Magazine. It is gratifying to have an expert, versed in the practicalities of golf course construction and use, indicate: "Your article 'Why Not Bentgrass Blends?' in the March Golfdom certainly hit the nail on the head. - - as you bring out, a mixture of grasses maintained as a bent fairway is far different from the same mixture maintained as a bluegrass-fescue fairway. - - considerable Merion persists - - and blends extremely well with the colonial bents that predominate, while the Creeping Red fescue makes a contribution in the first year or two. - - Hope to see more articles like this. I am convinced that the only way to achieve turf a golfer wants on fairways in the Northeast is through bent, bluegrass, fescue mixtures - -."

#### INSTITUTE REPRINTS UTILIZED FOR EDUCATIONAL SESSIONS

Mr. James Barger, Columbus Metropolitan Park District, telephoned the Institute, requesting reprints for distribution to homeowners attending their educational sessions on lawns. 100 copies of each of the following reprints were sent to Mr. Barger: "Good Lawns And Rose Splendor," "How To Get A Good Buy On Grass Seed," and "Modern Power Mowers."

#### GRASS GROWTH AND CARBOHYDRATE RESERVE

Brown and Blaser, Virginia, in an article in the November-December Crop Science, report studies on carbohydrate reserves in tall fescue and orchardgrass. Their findings are very likely applicable to fine turfgrasses as well, supporting well-known observations as the weakening of Kentucky bluegrass in hot weather by forcing it with excessive nitrogenous fertilization. Brown and Blaser found that any factor increasing growth (be it fertility, temperature, rainfall, or chemical treatments) reduced carbohydrate reserves. Conversely, low nitrogen, temperature, moisture or application of maleic hydrazide appreciably increased water-soluble carbohydrates. In the latter case, there is accumulation of energy fixed by photosynthesis, which exists in excess of the requirements for growth. Arizona research finds similar reasons for "summer slump" in alfalfa production.

#### FROM THE WISCONSIN TURFGRASS CONFERENCE

John Voight made some comments at the 1965 Wisconsin Turfgrass Conference that members might like to hear. He was talking in general about turf for parks and institutions.

"The basis of turf-wear resistance is adaptable grasses. Merion bluegrass, for example, provides heavy leaf cover, has ability to respond to heavy feeding and offers increased wear-ability for hard usage areas. A blend, to include equal

parts of common Kentucky, Park, Delta and Merion bluegrasses also is worthy of consideration. Tests at the Boerner Botanical Gardens have indicated that practically all of the attributes one looks for are evident in this mixture and it has more merit than a single grass species used alone."

"The fine fescues are enjoying increasing favor, and rightfully so, especially for large acreages such as parks, golf courses and cemeteries, because, like common Kentucky bluegrass, they perform well without special pampering. Most established parks, public institutions and cemeteries have a good deal of shade. Fine fescues, along with their counterpart Kentucky bluegrass, endure drouth well. All in all, Kentucky bluegrass-fine fescue turf merits a rich man's esteem on a poor park or institutional budget. This is generally why fescues are used extensively for large areas that must look presentable with only modest care."

#### WHY NOT FOR ROADSIDES?

USDA research at the Montana Agricultural Experiment Station "was designed to discover herbicides for control of reed canary, quack and brome grass, and permit establishment of competitive grasses such as Kentucky bluegrass, Creeping Red fescue, or redbud." The lower-growing vegetation is preferable for ditch banks, and one might presume likewise for roadsides generally.

In the experimentation, Amitrol-T gave complete kill of the quackgrass at 20 lbs/A. rate, whereas only 10% of the redbud was killed. Bluegrass also survived reasonably well. Paraquat was more toxic to the coarse grasses than the fine grasses, with Creeping Red fescue being the most tolerant.

#### BENTGRASS FEATURED

Lawn/Garden/Outdoor Living, in its February issue, utilized the Institute test data indicating that Highland bentgrass is not aggressive in undermining bluegrass turf on the Institute grounds. Bentgrass has been receiving a "bad press" in northern Ohio where volunteer bentgrass crops up in bluegrass lawns quite frequently. It is hoped that the L/G/O story will take some of the stigma off of bentgrass, by pointing up that problems arise chiefly with unpedigreed volunteer bentgrass, not the select sorts such as were planted on the Institute grounds. We are pleased that this information could be made so widely available to the trade.

#### SPREADING THE WORD

In "The Forum" column he writes for Flower and Garden Magazine, we are delighted to see Dr. John Baumgardt expanding ideas developed during the various Institute programs arranged by him in Kansas City. To the inquiry about spring lawn seeding in Kansas, he replies: "Yes, you can sow bluegrass in February or March - -. You may wish to 'dilute' the bluegrass with a small amount of Chewings fescue, but avoid the harsh meadow fescues - -."

#### LANDSCAPING SEMINARS

February 2, Dr. Schery was guest of the Division of Landscape Architecture at Ohio State University, where he conducted seminars on lawns and lawngrasses as they relate to highway, commercial and home landscaping. Institute literature had previously been sent to the department, and had been reviewed by students. Participants were all fourth and fifth year students in landscape architecture. Dr. Robert Thornberry is professor immediately in charge, although Dr. George B. Tobey, Department Head, was present for afternoon discussions. Morning was devoted to a general resume and background on the current status of lawns and lawngrasses, and a three-hour afternoon session gave opportunity for the showing of slides and give-and-take round-table discussion. While the audience is not large, it is a stimulating and significant one, and an excellent means for projecting the quality lawngrass image in influential circles.

#### REPRINTS REQUESTED

The Turf and Garden Products Division of Smith-Douglass, Norfolk, has requested 25 copies each of "Start Your Lawn Planning Now," "The Latest News About Lawns," and "Lawn Seed And Lawn Weeds," for internal use by its staff. We are glad to provide this leading fertilizer company with insight on quality lawn seed.

#### INTEREST THROUGH COUNTY AGENTS

One of the side benefits of our press kits in states where the Extension Service forwards the kits to urban county agents, is indicated by this letter from Longmont, Colorado.

"Dear Sirs: I was recently in the county agent's office and saw some of your bulletins on lawn care. - - Your news bulletins will be of great value to me in the future." - Robert D. DeCino.

Even though not all press kits find primary usage in newspaper stories, it is a good investment to have them in display in the office of a county agent. This lends added authority to the "good grass" story.

#### MORE MILEAGE FOR BLUEGRASS STORY

The Massachusetts Turf and Lawn Grass Council reprinted in its February Turf Bulletin magazine, Dr. Schery's "The Migration Of A Plant," which originally appeared in Natural History Magazine. The story, subtitled "Kentucky Bluegrass Followed Settlers Of The New World," retained all the illustrations in its original publication.

#### AMERICA WEEKS PROGRAM

A letter from John T. Connor, Secretary of Commerce, inquired whether the Institute might have display materials which could be made available to the Commerce Department for support of the overseas retail sales promotions planned as part of the "America Weeks program." Apparently in mind were attractive merchandise displays.

In replying to Secretary Connor, Dr. Schery mentioned availability of photographs and literature, although the latter would be entirely in the English language. Unfortunately, the Institute budget does not permit the design and production of booth-type exhibits which might have more suited Commerce Department aims.

#### HIGHLAND BENTGRASS RENAMED?

Dr. H. Scholz, of the Berlin-Dahlem Botanical Garden and Museum, kindly sent the Institute a reprint of his taxonomic study entitled "Agrostis tenuis 'Highland Bent' ein Synonym der Agrostis castellana." The reprint is in German and not all the fine points necessarily caught in our translation. The Lawn Institute is thanked for forwarding Highland bentgrass seed, and Dr. Schery's publications, including "The Curious Case Of Highland Bentgrass," are cited. After a thorough search of the literature and European herbaria, Dr. Scholz concludes that Highland bent is not *Agrostis tenuis*, but *Agrostis castellana*, a species characteristic of the Mediterranean region. *A. castellana* has been spread to a number of parts of the world, including western Germany and Chile, as well as the Silverton hills of Oregon. Appearance of this publication provides authority to regard Highland bent as *A. castellana* for those who feel it is a distinct species from Astoria and other similar bentgrasses.

#### ADVISOR MAILING MADE

In February the Lawn Institute Board of Advisors were brought up to date with Institute literature and informational sheets. Reprints sent included "Lawn Seed And Lawn Weeds," "The Migration Of A Plant," "Seed Selection Is Important," and "The Latest News About Lawns."

#### OHIO PROGRAM

The annual meeting of the Ohio Nurserymen's Association with associated societies (including turf management specialists) was held in Columbus January 24-27. Dr. Schery attended on behalf of the Institute. Dr. W. H. Daniel, Purdue, was chief invited speaker. In the morning sessions he dwelt on fairway maintenance and so "far-out" a subject as soil warming.

The afternoon sessions were devoted in large part to the sod business. Problems seem mostly of a business rather than technical nature. Apparently, much Ohio sod is still from old pastures. Growers do not regard a premium price for good seed as burdensome; costs to worry about are in handling and selling. It was generally agreed that sod grown on mineral soil is the preferable consumer product, but that sod grown on muck offers advantage to the grower (lighter, easier established).

A few statistics might be of interest. About 4000 yards per acre is an average yield. 30¢ per yard is about the average cost of production delivered to the wholesale market (not counting land and financing "overhead"). Capitalization of about \$500 per acre for irrigation is a minimum for any serious production.

No dissatisfaction was expressed with availability or quality of seed, even when Dr. Davis introduced a leading question to a sod grower wondering whether



bentgrass is a pest contaminating bluegrass plantings. The speaker, George Hammond, representing the growers, indicated that he had never had such a problem.

Herbicides, fungicides and insecticides were then reviewed by experiment station research experts. There was nothing strikingly new or different in the recommendations for weed control, Dr. Stroube believing that herbicides are at hand for completely controlling broadleaf weeds. The problem of coarse perennial grasses in fine-textured turf remains.

Dr. Partyka pinpointed numerous specifics for various diseases, the only novel observation being that in 1965 there was detected for the first time in Ohio serious inhibition of turf revival due to nematodes. He also mentioned that Pythium (a disease frequently fought) can be beneficial by attacking fairy ring - a means of biological control.

Dr. Polivka reports rather poor results with chlorinated hydrocarbons in webworm control, but good response from carbaryl, Diazinon, Disyston and Thimet (among others). Likewise, the chlorinated hydrocarbons have been relatively ineffective in chinchbug control with bentgrass; better control is had from the latter group of insecticides.

Afternoon sessions terminated with discussion of *Poa annua* - at once both the most detested and most useful golf course species. It makes an excellent putting surface, and were it eliminated from many Ohio greens little else would remain. At the same time, the shallow root system and proclivity for low seedhead formation make it a problem and a risk. There is no sure control yet for *Poa annua*.

#### POTASH INSTITUTE COOPERATES

It was most pleasant to have word from editors of the American Potash Institute, offering to send to whomever the Lawn Institute might specify, complimentary copies of the new brochure on turfgrass entitled "Put Quality In Your Lawn." We appreciate the personalized mention of the Lawn Institute.

#### MORE AIRPORT MOVIES

Films such as "Bluegrass Beauty" have been much in demand for sponsored showings, such as are becoming increasingly popular at airports. Previous Harvests have mentioned how significant an audience sees these free movies while awaiting planes. We note that after the striking success in Cincinnati and Atlanta, terminals have now opened, or are being opened, in Minneapolis, Kansas City, Cleveland and Denver.

#### THANKS FROM FLORIDA

Last autumn the Lawn Institute donated to the Florida Division of Corrections, a small amount of winterseeding mixture for use by Sergeant B. J. Carter, Horticulture Supervisor, in his educational program with inmates. Sergeant Carter thanked President Mangelsdorf with a note and pamphlet, "As a gesture of appreciation we are sending you this brochure to thank you for your past interest and contributions. It is also hoped that in this small way we may be able to show you how you've been of help to us in our program."

The 16-page booklet, "Avon Park Correctional Institute Nursery Story" is devoted to a resume of the program, involving nursery plants, propagation houses, ornamental plantings, orange groves and suchlike. With reference to the seed furnished, the brochure states: "Through the kind donations of wintergrass seeds: a mixture containing fine fescues, Kentucky bluegrasses, and advice to go along with this, not to mention their keen interest, this program is showing marked success. Around the front, back and sides of our Administration buildings, there is a rolling, thick carpet of velvet green, which sharply contrasts with other areas not similarly treated to seeds."

#### ATHLETIC FIELD INTEREST

Dr. Pelham Mead, Botany Department, Springfield College, Massachusetts, asks for up-to-date information on turf for athletic fields. This inquiry is typical of much recent interest at college level. An assortment of reprints with a letter of discussion was promptly sent. It is encouraging that turf has become subject for several lectures in the freshman botany course, a practical approach for making botany pertinent in everyday life.

#### WIDE USE OF INSTITUTE REPRINTS

The Lloyd Mansfield Company continued its excellent employment of Lawn Institute literature in behalf of a member client, by mailing out this spring four different reprints. Those reprints utilized, in the quantity of 1500 each, were: "Lawn Grasses: What Kind For Your Customer?", "The Latest News About Lawns", "Lawn Care - 23 Questions Most Often Put To Dealers", "Fall Offers Ideal Growing Conditions For New Lawns." The following letter of appreciation was received from the Lloyd Mansfield Company: "Dear Mr. Schery: Thank you for your most thorough letter of March 18. Mr. Witt called me (as promised) and shipped the last reprints via Greyhound bus on Friday. We've just been notified of their arrival. Thank you again for your wonderful cooperation."

#### PHOTOS SENT PIONEER PRESS

Hubert Dustin, preparing the Pioneer Press annual gardening pictorial magazine, requested from the Institute photos that might supplement press kit literature. Thirteen such were furnished, which can help round out pictorial coverage in the garden magazine section on lawns.

#### IOWA STATE LAWN SEED SEMINAR

Dr. Roberts, Institute advisor, scheduled lawn seed as a subject for a graduate seminar conducted by D. B. Chittenden. Mr. Chittenden contacted the Lawn Institute for information relating to quantities, value, and other pertinent information concerning the principal lawngresses. It is good that so influential a graduate group as in the turfgrass work at Iowa State University is paying particular attention to lawn seed. The Institute is delighted to furnish such information as is available.

#### OF INTEREST TO SPONSORS

" - - you mentioned that our Institute 'does things with a flourish' you envy. That's an interesting reaction because all of us in the Potash Institute have always thought we operated very conservatively and with amateurish tones out of the editorial section, at least. And, on the other foot, we have greatly admired the professional image of your public information kits on better lawns. So, I guess the point behind all this is a simple one: when you're in the middle of the deep woods sawing, you rarely tell a dent is made at the end of a working day - - but an outsider can come in and see a lot of sky." - Santford Martin, American Potash Institute.

#### TURF MAINTENANCE COSTS

Parks & Recreation reports on the Thompson Manufacturing Company survey of turf maintenance costs. It is estimated that five billion dollars are spent each year in the United States for turf maintenance. A typical California golf course spends over \$100,000 alone. Labor is by far the most important cost (70-80%), and perhaps surprisingly cost of water is second (8-13%). Seed along with fertilizer, chemicals, etc. comes out of the 9% allocated to supplies, sharing in the 4½ million dollar market that this represents.

#### SOD FRENZY CONTINUES

It seems as though almost every turfgrass conference and publication is reviewing the sod industry these days. Recent examples are Colorado, Ohio, New Jersey, Wisconsin and Michigan conferences, and stories in various magazines (Dr. Schery has been asked to contribute one on sod for the Massachusetts Turf Bulletin). It adds up to considerable pressure for very high quality seed - with bluegrass seed completely free of *Poa annua* and bentgrass. Dr. Indyk's recent story on sod establishment, in the March Weeds, Trees and Turf, points this up: "Difficult-to-control weed problems may be introduced very easily into an area through poor quality seed. *Poa annua* and bentgrass are examples. Certified seed gives a considerable measure of assurance - - fortunately, sources of seed are available which provide the added assurance of freedom from *Poa annua* and bentgrass." Indyk then notes how "weeds" can be carried undetected as "crop" that need not be declared.

#### LAWN INFORMATION REQUESTED

"We are working on a national survey - - would appreciate all the information that you can give us on home lawn and care - - will appreciate all the help you can give us." - Richard Higgins, Area Director, Partake of Central Iowa

#### ROADSIDE SEEDING ADVISORY APPEARS

Proceedings of the 24th Short Course on Roadside Development, for which Dr. Schery prepared "Buying Seed For The Roadside" appeared in March. Seven illustrations accompanied the text, copies of which have been circulated to the membership. It is good to be on record in this prominent reference volume concerning

criteria for purchase of seed for seeding the roadsides. It is hoped that more highway departments will experiment with all fine-textured grasses for seeding some of the berms, at least in more urban locations.

#### INSTITUTE REPRINTS IN MAILING

The Proceedings of the 1966 Wisconsin Turfgrass Conference will be mailed to all registrants. Dr. Newman asked that "Lawn Seed And Lawn Weeds" be made available for inclusion in the mailing, and that as well he had requests for "Turfgrass Portraits I: Kentucky Bluegrass," "Turfgrass Portraits II: Fine Fescues," and "Turfgrass Portraits III: Bentgrasses." A total of 600 reprints were sent to the Wisconsin Extension Service for dispersal through its facilities.

#### SEED WORLD COOPERATION

The March 11 issue of Seed World continued its use of Institute materials, with the by-line article "Spring Lawn Seeding." Sample advice: "A blend of fine-textured grasses (Kentucky bluegrass, fine fescue, bentgrass all listed as 'fine-textured' on the label) goes a great distance, too, so voluminous are the seeds in each pound - -."

#### WEED CONTROL SLANTS

Studies at Michigan State find that Paraquat in combination with other herbicides (simazine, diuron, amitrole) increases the control of quackgrass as compared to any of the chemicals alone. There is increasing evidence of synergism and interaction among herbicides.

Ohio research formalized observations quite apparent to lawnsmen. Broadleaf weeds, and more recently annual grasses, are so well controlled these days with herbicides, that perennial (grasses) with rootstocks remain the only serious problem. The problem both seems worse (because standards are higher, and the contrasting annuals are eliminated), and is worse (because, relieved of competition, the perennials have easier growing).

Residual toxicity from atrazine varies greatly, and is worse on soils high in organic matter. Studies in Connecticut indicate that de-toxification can be at least partially achieved by the mixing-in of activated carbon.

#### SEED CHART FOR MASS SEEDING

Finn Equipment Company of Cincinnati, manufacturer of the Hydroseeder, used worldwide for roadside and other large scale seedings, asked the Institute to re-organize and correct a seed usage chart distributed nationally. Credit is given the Lawn Institute on the publication.

In keeping with modern labeling procedures, the chart groups fine-textured species (Kentucky bluegrasses, fine fescues, bentgrasses, etc.) in a superior heading. Seeds per pound, pounds per bushel, seeds per square foot at specified seeding rate, suggested seeding rates, and brief comments about adaptation of the species,

are given for numerous grasses and legumes. Low-growing, "fine-textured species are suggested especially for urbanized areas where mowing cannot be frequent.

#### WEED CONTROL IN TURF

Section VII of the Weed Society of America concerns itself with this particular subject, and is the chief area of interest to the Institute. Members may be interested in a resume of some of the reports given at the meetings.

A symposium of invited papers relating to weed problems in different regions presented little new information. Seedsmen and turfgrass experts are already familiar with the serious weeds. By and large annual bluegrass seems to be considered the most universally serious weed, although experts don't necessarily want it put on noxious lists. Tall fescue and sedges are not far behind. It seems conceded that as one weed is controlled, better opportunity is made for others; viz. as crabgrass is controlled chemically, goosegrass becomes more prevalent. Dr. Burt, Florida, covered the reasons why weeds are perhaps more a problem in the South than elsewhere (long season; much insect, disease and nematode trouble; low soil fertility; much rainfall and leaching; etc.).

University of Missouri research was encouraging, in that continuing applications of pre-emergence herbicides over a period of many years by-and-large are not detrimental to bluegrass turf. The exception has been with arsenical compounds, particularly in dry years, and also chlordane. Good control of broadleaf weeds, too, was obtained with Zytron, but annual grass control only with Dacthal and most others. Reports on Azak indicate relative safety: there may be a little thinning of fine fescues at low cut, and failure to control broadleaf weeds. But the 10 lb./A rate of Azak is suitable for both North and South, and controls goosegrass and *Poa annua* to some extent as well as crabgrass.

Iowa State University research on the use of pre-emergence herbicides for crabgrass control in golf greens suggests "caution." Different selections of bentgrass vary markedly in their susceptibility to injury; both Zytron and Dacthal have caused thinning in certain instances. Usually no difficulty arises when pre-emergence treatment is used one year only, but there seem to be some difficulties when year-after-year applications are made. Discussion showed divided opinion as to whether lighter rate booster applications a second year are worthwhile or not; a number of researchers indicated that full strength treatment each year was needed to be effective.

Siduron (Tupersan of DuPont) has certain unique advantages as a crabgrass preventer. First of all, it is remarkably safe - can be used around shrubbery and ornamentals. Secondly, it is specific for crabgrass (and certain other annuals), and seems not to seriously injure any of the quality lawngrasses. Therefore, it can be used along with bluegrass, fescue and bentgrass seedings, and can even be used as a seed treatment. It is said to kill bermuda and carpetgrass seed, and give some control of nimblewill but not *Poa annua*. Photographs showed that crabgrass will not root through a layer of Siduron in the soil, although bluegrass will.

"Basic Considerations Affecting Weed Control In Turf" included a literature review on residual properties of herbicides in the soil by Roberts. Black gave a biochemical review of herbicidal activity as it relates to physiological processes. More understandable and practical were papers by Nelson (British Columbia) on the

translocation or movement of herbicides in the plant, and by Youngner (California) on the factors influencing herbicide absorption by the plant. Nelson reviewed which tissue systems are responsible for transporting herbicides, and emphasized that all movement is related to the presence of sucrose (sugar) once the herbicide has penetrated the plant surface. Techniques for introducing and following movement of herbicides were discussed. Youngner emphasized that anything used to prevent loss in application had economic importance. He reviewed droplet size, surface characteristics of the leaves, surfactants, and so on as they relate to the efficiency of herbicides.

#### PRESS KIT PREVIEW

Our clipping service doesn't begin until April, so we have no inkling of March usage of stories. Thanks to President Mangelsdorf, who spotted a pickup in the March 12 Missouri Ruralist, we know that publicity is already under way. The title used was "Crabgrass Everywhere But In Lawn Seed." Sample quotes: " - - Will you be one of those who plants a lawn this spring, and has crabgrass this summer? Would you then blame your garden store for selling lawn seed that contained crabgrass? If so, you are dead wrong, says Robert W. Schery, Director of the Lawn Institute. - - If you have crabgrass in your lawn, the best defense is to maintain a thick turf of perennial grasses. A dense Kentucky bluegrass-fine fescue lawn mowed tall, resists invasion. Crabgrass can't fight shade in tall-mown bluegrass any better than it survives under trees. So plant your lawn to long-lasting 'fine-textured' grasses. - -"

#### BLUEGRASS BEAUTY RESUME

The Institute movie, "Bluegrass Beauty," still has an occasional showing, even if withdrawn from general distribution. Modern Talking Picture Service in its annual reporting for 1965 indicates the film to have been shown 187 times to a total audience a little over 11,000. New York had far and away the most bookings, with Iowa, Illinois and Ohio closely bunched in second spot. Twenty-one states had bookings. About one-fourth of the showings in 1965 were to school groups. Total certified showings of the film now stand at 17,238,600 for television audience, 166,680 for live audiences.

#### INSTITUTE IN EUROPE

We are pleased to have this word from our frequent correspondent, Chris Eisele, in Darmstadt, Germany: "Dear Bob, Thank you very much for - - permission to translate (into German) the story from Seed World. - - The next edition will carry your article about lawn seeds. - - a professor of the University Giessen will adapt your charts to European conditions - -."

#### WHAT THEY ARE SAYING ABOUT THE INSTITUTE AND ITS RELEASES

"Dear Bob: I enjoyed very much reading your article 'Migration Of A Plant' in the December issue of Natural History Magazine. Bluegrass is certainly a versatile plant. - -" - G. O. Newton, Vice President, Consumer Products, Northrup, King & Co.

"I would like to obtain some facts and figures pertaining to the lawn and turf industry for use in a general horticulture course I will be teaching soon. - -" - Dr. John E. Fucik, Texas College of Arts and Industries

"I recently read your interesting article in Ann. Missouri Bot. Gard.: 'This Remarkable Kentucky Bluegrass,' and enjoyed it very much. It contained an excellent review - - of work done with this very important grass - - contained some interesting ideas - - that could be applied with other plants. - - would appreciate very much having a reprint - -." - Dr. Richard W. Pippen, Department of Biology, Western Michigan University

"Dear Dr. Schery: Thank you for your letter of the 7th and information on lawns. Your help is greatly appreciated - -." - Richard Higgins, Area Director, Partake of Central Iowa

"Dear Bob: Thank you very much for the reprints mailed with your letter of February 8. We appreciate being on your mailing list. I must confess a bad case of envy with respect to your writing ability. - -" - Marvin H. Ferguson, United States Golf Association, Green Section, Texas A & M University

" - - I still would like to receive your literature as I think it is great - -." - Roy K. Rasmussen, Grounds Superintendent, University of Nebraska

"Professor Robert Newman informs me that you will put County Extension Agents on your mailing list. - - Would you add my name - -." - Ernest Ehrbar, County Agricultural Agent, Brown County, Wisconsin

"Dear Dr. Schery: - - In the December 'Natural History' I found your very interesting article on bluegrass. - - this is the first article that I have happened to see that tried to trace the spread of bluegrass in the area that is now the United States. It is a splendid job, and I have greatly enjoyed it. - -" - Charles J. Willard, Consulting Agronomist, Columbus, Ohio

"Dear Bob: - - I read with very much interest your article 'Lawn Seed And Lawn Weeds.' I would like to have your permission to translate it - - into German - - and print it under your name. This would help our discussion about lawn seeds. - - Thanks a lot in advance." - Chris Eisele, Hesa, Darmstadt, Germany

" - - I deem it an honor to be included on your Board of Advisors. My present research activities, however, are devoted entirely to roadside turf. I am very optimistic, nevertheless, that it will be possible within the next few years to begin developing a fine-turf research program also. - -" - A. E. Dudeck, Turf Research, The University of Nebraska

" - - Please let us know your thinking about the follow-up article as soon as possible. Again, thanks for your fine work and cooperation." - John K. Lawo, Jr., Associate Editor, Resort Management

"Dear Bob: We would appreciate having your opinion as to the need and appeal to homeowners of a chemical which is able to kill annual broadleaf weeds emerging in newly seeded lawns without harming the seedling grasses. - -" - B. H. Emerson, Amchem Products, Inc.

" - - We would like very much to receive copies of 'Thatch And Your Lawn,' an article we came across a couple of weeks ago. This article does the selling job we have been trying to accomplish. - -" - C. Melton Harrison, United Rent-Alls

"Dear Bob: Thanks for the information on turf. - -" - Delbert D. Hemphill, Department of Horticulture, University of Missouri

"Dear Bob: The Lawn Institute packet is swell. Thank you for always remembering me. I hope everything is going well with you." - Wayne C. Morgan, Farm Advisor, Los Angeles, California

"Dear Dr. Schery: - - We are certainly glad to have the benefit of your observations. Please pass along to me ideas you have for specialized articles and the particular approach that you feel most appropriate in this publication." - George H. Seferovich, Editorial Director, Grounds Maintenance

"Could you please send me a copy of 'How To Select The Right Turfgrass' - -." - James E. Decko, Recreation Supervisor, Sheboygan, Wisconsin

" - - Also appreciate your copy of 'Lawn Seed And Lawn Weeds.' If available I could use approximately 10 copies of this. Best personal regards remain," - Hartl Lucks, Turf & Garden Products, Smith-Douglass

"Thank you for continuing to send the various reprints and the news of the Institute. You are to be commended for your fine literary contribution to our field of turfgrass management. I hope all is well with you and wish you a fine season." - C. R. Skogley, Agronomy, University of Rhode Island

"Thank you so very much for all the fine materials on lawns that you have sent me in the past. They have all been such a great help to me in so many ways. The most recent one I received this week is especially good." - - Venus Barnett, The Kingsport Times News

"This was a real treat, Bob - - - to hear directly from you concerning the material which you are sending in - -." - Allen J. Fagans, General Manager, Resort Management Magazine

"Dear Bob: We appreciate your thoughts on a possible new weed killer for new seeded lawns. - - I appreciated, too, the reprints you enclosed - - the kind and volume of your releases are a frustrating inspiration!" - B. H. Emerson, Research Department, Agricultural Chemicals Division, Amchem Products, Inc.

"Dear Dr. Schery: Many thanks for the fine story you prepared for the Quality Motels Reporter. It is much appreciated. - - and I'm confident that you will be pleased with the presentation. Again, many thanks." - Bill Kofoed, Hank Meyer Associates, Inc.

"This is to advise you that I was recently given the opportunity to take over as Deseret News Garden Consultant. - - Thanking you for your cooperation and assistance in the past and expressing our hope for continued help, may we remain - -" - David E. Lofgren, Landscape Horticulturist, Salt Lake City, Utah



"Dear Dr. Schery: We have been referred to you by the National Fertilizer Solutions Association. They felt you would be better equipped to handle our request. - - We would appreciate anything you might be able to make available to us." - Janet DeBevoise, Business Information Dept., McGraw-Hill Publications