

BETTER LAWN

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Harvests

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WINTERSEEDING POTENTIALITIES IN THE SOUTH INVESTIGATED BY INSTITUTE

In recent years there has been increasing disenchantment with ryegrass for certain types of winterseeding in the South. Substitutes for ryegrass have been sought, especially for golf green seeding into dormant bermudagrass. Interest in this matter was sufficiently intense that the Lawn Institute completed a rather extensive investigation. Director Schery visited Florida and Georgia in December, and the Southwest in February. Results of these investigations have been reported to the Executive Committee and representatives of associated groups having Board seats.

Reports on the subject consume twenty pages of single-spaced typing, and are too voluminous to review in detail here. The matter will be discussed by the Board at the annual meeting in May, and decisions made concerning further publicity and contact work to be continued in the South. Working relationships have been set up with a number of southern contacts, and a display on winterseeding was arranged for at the 2nd Annual Florida Turf-Grass Trade Show at Miami Beach.

There are a number of reasons why ryegrass has fallen into disfavor. Experts contend it is not the best putting surface in the first place, and it offers certain maintenance difficulties, including aggressiveness that sometimes inhibits ready revival of the bermuda. Especially noteworthy this year was that ryegrass winterkilled from the unusual cold, in locations as far South as central Mississippi and southeastern Texas. Bluegrass, fine fescues and bentgrass were far less bothered.

It is rather surprising that Kentucky bluegrass and fine fescues, normally upright lawngrasses in the North, can be mowed at $\frac{1}{4}$ inch on putting greens. Yet such is the case. Some of the most attractive putting surfaces seen in the South were of these grasses, in combination and with other cool-season species. Of course bentgrasses are well known for withstanding close mowing. Another species proving successful in tests across the South is *Poa trivialis*, although the yellow color is often disliked, and its tendency to bring in weed seeds is not admired.

Prospects for a sizable market for other than golf green seeding seem less hopeful in the immediate future, although certainly the home lawn acreage would offer greater potentiality long range. There is interest in winterseeding especially along tourist routes southward, where winter "show" is all important to a successful season. Winterseeding is widely practiced by motels, and many commercial establishments such as undertaking houses. Some of the advantages fine fescue, bluegrass and bentgrass lend to golf greens, would also seem to have some applicability here.

Techniques for establishing the smaller seeded fine fescues, bentgrasses and bluegrass, in contrast to the larger seeded ryegrass, have not been fully worked out yet. In some instances growth inhibitors, such as maleic hydrazide, applied to the bermuda before winterseeding, seem helpful. Tests at Mississippi State College have definitely showed close mowing (of lawn-type turf) to be helpful for quick, full establishment. Vertical mowing and top-dressing are usually practiced with golf greens. Many of the select golf courses are today utilizing the northern grasses mentioned, usually in mixtures, and in some cases included with ryegrass. But several experts feel that ryegrass is definitely "finished" as a winter golf green cover, at least in certain locations.

Total potential market for golf course usage would not seem great, less than a million pounds. But interest might eventually "rub off" for the seeding of commercial properties, and even home lawns if seedhouses are willing to launch a promotional effort. But a winterseeding market is a good one, in the sense that it is annually repeatable. Nor is price too much of a consequence, if, for example, in the leading tourist centers bluegrass, fescue and bentgrass out-perform ryegrass. A survey of Florida golf courses indicated that ones in major tourist areas do not hesitate to spend thousands of dollars for the winter-seeding program; a few dollars more or less for the cost of seeding a green is inconsequential.

We feel that this is a relatively untapped market, worthy of further investigation. The severe winters of 1961-62 and 62-63 make this an opportune time for introducing other seeded grasses into the South as substitute for ryegrass.

VISIT WITH DR. KEEN, KANSAS STATE UNIVERSITY

On the way to winterseeding inspections in the Southwest, Dr. Schery had chance to drop in for a visit with Dr. Ray Keen, in charge of turfgrass work at Kansas State University, Manhattan. The program there is receiving increased stature, with experimentation well under way on the large, newly assigned field grounds outside of town. Data is about complete on the putting green soil mixture studies at the old grounds, and Keen concludes that fine sand as about 85% of the mix, the remaining 15% divided between organic matter and good soil, makes an excellent putting green base. Coarse sand drains too quickly.

Springfield remains the best bentgrass performer, although Penncross, too, has been good. Keen is still looking into red fescues said able to withstand temperature of 110° well. The severe winter, following a mild autumn with poor "hardening-off" has upset Keen's search for a winter-green bentgrass; all candidate selections went off-color quickly, and remained dormant, under the trying winter this year.

Spring deadspot continues a very severe problem on bermuda, U-3 especially, and seems to have some "antibiotic" influence that prevents a recolonization quickly. The severe winter this year will probably knock out many bermudagrasses that heretofore had been considered hardy. U-3 is borderline at this part of Kansas, and Keen feels that old selection (K-151) adapted to the area will prove superior.

Future plans call for establishment of a sizable bentgrass planting, which can serve as study area for fertilizer and disease problems. An intensive study on thatching is also planned.

INSTITUTE DIRECTOR VISITS DENVER BOTANIC GARDEN

Previously the Lawn Institute had sent seed for demonstration planting to the Denver Botanic Garden. Dr. Schery called on Director Hildreth at the Garden on his way West in early February. The Denver Botanic Garden is expanding, has plans for a conservatory that will cost half million dollars.

The grounds are still being developed, but there is some excellent bluegrass turf now established. Kentucky bluegrass does exceedingly well in the Denver climate, so well that Dr. Hildreth prefers to use it alone rather than in mixtures.

The winter has been very dry, and at the time of visit little snow had yet accumulated in the mountains. This may bode ill for irrigating high plains lawns next summer.

UNIVERSITY OF ARIZONA TURFGRASS PROGRAM

Turfgrass investigations continue to receive attention at the University of Arizona. Dr. Folkner, although ill much of last winter, has cooperated generously in winterseeding investigations with seed sent by the Institute. About 150 winterseeding plots were established, in which the performance was checked for several varieties of fine fescue and bluegrass (compared to the traditional ryegrass), both without and with growth inhibitors such as maleic hydrazide and Paraquat.

Some of the original work on using MH-30 as a growth retardant was done by Folkner at the University of Arizona. MH-30 sprays prior to winterseeding seemed to be very effective in giving better catch of the northern grasses seeded into turfgrass varieties of bermuda. Unexpectedly, there was continuing stimulation to the wintergrasses as a result of the original spraying to the bermuda!

The Eriophyid mite is still a problem in Arizona, and seems worse on uncared-for grass than on that receiving regular attention. Sprays such as diazinon will control the mite. The mite causes the bermudagrass to grow in dense tufts, something like the "witch's broom" of hackberry trees.

DIRECTOR SCHERY VISITS RESEARCH INSTITUTIONS IN EAST TEXAS

Texas State University was recently visited, in conjunction with inspection of cooperative test plantings in Texas. Dr. Holt and other experts still regard st. augustine as "the" grass for east Texas, although recognizing that if chinch-bugs make inroads as in Florida (on top of the brown thatch disease now prevalent in winter) this may spell finish to st. augustine recommendation. Holt feels that bahiagrass is better adapted to Florida than to Texas.

Crabgrass and goosegrass remain a problem on golf greens in the South; there is consideration of using some of the better pre-emergence crabgrass herbicides to prevent invasion. Sod webworm attacks Tifgreen bermudagrass extensively, but the experts feel that an insecticide applied in the afternoon, and washed deeply into the crowns the next morning, will control the trouble with three consecutive sprayings or less.

MISSISSIPPI STATE UNIVERSITY DOING SIGNIFICANT TURFGRASS TESTING

Bob Thompson and others have turned up significant findings, in testing winter-seeding with seed furnished by the Lawn Institute. Excellent establishment of fine fescues and Kentucky bluegrass in a variety of southern turfs was possible when permanent grass was mowed close ($3/4$ inch or less), but the stand was generally thin when the turf was not mowed. This proved true regardless of additional treatment, such as top-dressing, thinning, etc. It would seem that winterseeding with quality turfgrass is possible for home lawns, if only proper techniques are followed.

The winter was extremely severe in Mississippi this year, killing out ryegrass on the test plots. Both on lawn-type turf, and putting greens, other northern grasses showed up to great advantage. Kentucky bluegrass exhibited the greatest tolerance to cold, scarcely discoloring at as much as 1° minus at Starkville, something of a record low for that part of Mississippi.

HIGHWAY SEED PURCHASES WARNED OF SHORT SUPPLY

Year-end production figures indicated a probable short supply of tall fescue, and many seedsmen were fearful of not being able to fill roadside seeding orders through all of 1963. The Lawn Institute issued a mailing to all highway departments and selected names and addresses interested in highway seeding. The information was also made available for announcement through the Highway Research Board.

1963 may prove a year in which it is possible to re-establish for highway seeding, a greater proportion of finer-textured grasses such as Kentucky bluegrass and fine fescues, which lost ground nearly a decade ago (when prices rose to inordinately high levels), that has never been regained.

Statements by Messrs. Mangelsdorf and Edwards are quoted below, as they appeared in the mailing. If anyone should wish copies of the reprint (Large Area Seeding) or the Missouri Conference presentation (Establishing and Maintaining Turf on Highway Right-of-Ways), copies may be requested from the Marysville office.

"The available supply of tall fescue for Spring 1963 seeding is much below normal.

The 1962 crop was 20% below the previous year, which in turn was not a large one. Seed carried from last year into this, is about 40% down. Fall seeding has already cut deeply into stocks.

If last year's usage were repeated this year, the total supply of tall fescue would fall short by about five million pounds. As a result, the price now is about double that of a year ago.

While there are some situations which will require tall fescue so long as it is available, - regardless of price - your attention is called to this shortage now, when there is still time for you to review and revise your seed specifications toward other desirable grasses. Where use of tall fescue can be reduced or replaced, agronomists suggest (among other kinds), increased proportions of Kentucky bluegrass and fine fescues (*Festuca rubra*). On good soils in many

northern locations, these latter grasses make excellent cover by themselves. Being comparatively low-growing, they require little or no mowing on distal berms.

Dr. Schery's comments on roadside turf near Buffalo, New York, is a case in point (see enclosed remarks to Missouri Turfgrass Conference). You may also like to have a copy of "Large Area Seeding," by the Lawn Institute Director. A news note suitable for press or bulletin board announcement is likewise enclosed.

Thank you for your understanding. Seedsmen, being dependent on nature, unfortunately cannot regulate seed production to suit the demand." - Edward F. Mangelsdorf, President.

A shortage of tall fescue grass seed, because of poor growing weather in seed-producing areas, is in the making, according to Roy Edwards, past president of the American Seed Trade Association.

Because of the growing shortage, Edwards added, the price of tall fescue seeds has already doubled over its average price of the past several years.

"This is of special interest to the nation's highway planners, since budgets and specifications are so rigid. It takes time to change these requirements, so that the problem is going to make itself felt when highway construction work gets under way," he explained.

Production of tall fescue seed in 1962 was off almost a fourth, and the seed supply carryover from 1961 was down about 40 per cent. Edwards says that there will be adequate supplies of fine fescue and bluegrass seeds -- at economical prices -- to replace the missing tall fescue supplies.

FIRST TURF MANAGEMENT SHORT COURSE, UNIVERSITY OF MAINE

A Turf Management Short Course was initiated by the University of Maine in mid-March. Dean Libby opened the conference, emphasizing that Maine's natural resources are limited, except for recreation. The tie-in to fine turf is obvious, a field in which Maine hopes to make up for lost time.

Staff members of the university reviewed Maine soils. By and large they are acid (pH about 5.3), and of low fertility. Many are on the sandy side. Interestingly, the 5 foot average depth of snow at conference time contained about 12 inches of water, a snow pack roughly the equivalent of four months average rainfall.

Dr. Schery of the Lawn Institute spoke on Lawngrass Varieties and Mixtures, and at the banquet. Excerpts are given elsewhere.

Dr. Skogley, from Rhode Island, spoke about turf establishment, and on weed control. Skogley said that seed mixtures half bluegrass and half fescue show the fescue squeezing out the bluegrass initially if the seeding rate is over 4 lbs./M. Skogley read from an initial report of turfgrass research at the University of Rhode Island, noting that bluegrass seedings were made as early as 1898. Skogley doesn't think there's any danger of arsenic build-up from the present arsenicals used in weed control, since soils are generally well buffered.

and grasses quite tolerant. Discussion pointed out that arsenic can confuse phosphorus readings in soil tests, and may be instrumental in some reports of abnormally high phosphate level.

Lee Record, discussing irrigation and greens management, noted that much of Maine actually depends upon *Poa annua*. When this goes out, as it did in the hot summer last year, it becomes replaced by other "weeds", knotweed particularly. Record didn't feel there was much of a case for potentiometer readings of moisture needs, because golfers demand that the greens be kept moist enough to hold the ball, which is too moist to give a meter reading. It was generally agreed that so much watering is undesirable, but that there's no practical way to get around it since the golfers are the customers who pay the bill.

"LAWNGRASS VARIETIES AND MIXTURES" EXPLAINED TO MAINE CONFERENCE

Dr. Schery was asked to discuss lawngrass varieties and mixtures, as one of his presentations to the First Annual Maine Turfgrass Short Course. Presentations are expected to appear in a Proceedings of the conference, but Institute members may be interested in Schery's opening paragraphs.

"There is a lot of fanfare these days about turfgrass varieties. Is this a turn of events that means better-looking, more easily kept turf? At the moment the answer seems both yes and no, and I'll have to explain that in a moment. But don't write off the old favorites, such as mixtures of natural Kentucky bluegrass and fine fescue varieties, or the erect bentgrasses such as Highland, for climates such as Maine.

Really there are two kinds of turfgrass usage these days, that by the specialist, and that by the non-specialist. Golf course superintendents and custodians of quasi-public turf must be specialized and skilled just as is their counterpart in modern agriculture. This is 'business' turfgrass growing, and competitive as business always is.

On the other hand, the homeowner is more often than not looking for 'pleasure' turf. To him adequate performance, simply and economically is the keystone. Neither temperamentally nor by training is he equipped to utilize highly-selected, specialized varieties that need pampering, and keep them at their best. The exception, of course, might be those individuals who make having the 'best lawn in the neighborhood' something of a business.

I have come to the conclusion that the choice and performance of a grass variety thus depends more upon the user, then upon the inherent characteristics of the grass. Nor do I warm to the plethora of advisories saying that this, that and the other thing must be done in order to have a good lawn. As most side roads in Maine can show you, Kentucky bluegrass can make a fine cover with a minimum of attention where soils are at all good; and the fine fescues do nicely where soils are thin and dry. Even Highland bentgrass will make a charming cover in the misty higher elevations or where ample watering is possible.

Of course mixtures are well known for spreading the risk. A combination of Kentucky bluegrass and fine fescues is a natural in this respect, providing the excellent color, texture and luxuriance of the bluegrass combined with the special hardiness and attractiveness of the fine fescues. The bluegrass is

itself a 'mixture of varieties', with seed coming from plants growing on high ground and low, fertile soil and less fertile, and so on. This natural genetic mixing is further compounded by mechanical mixing, in the normal course of seed blending operations.

A mild narrowing of genetic diversity comes with selecting varieties not greatly different from natural bluegrass, such as Park and Arboretum. Park is the result of the combining of a dozen or so especially vigorous strains (clones) selected by the University of Minnesota. The seed is carefully produced under agricultural procedures that assure full, plump seed that sprouts quickly, with a lot of seedling vigor. - -"

33RD ANNUAL TURFGRASS CONFERENCE HELD IN MICHIGAN

An elaborate two day program was well attended in Michigan for the 33rd Annual Turfgrass Conference. The extensive research staff at Michigan State reported on its progress, supplemented by presentations by "outsiders" Dr. F. L. Howard of the University of Rhode Island and Dr. Robert Schery of the Lawn Institute.

Dr. James Tyson opened the program with a discussion of the importance of phosphorus as a fertility element. Plots on which phosphorus was not added were as barren as unseeded ground. Dr. R. L. Cook considered the minor elements, not too serious a problem with most turfgrasses. Dr. John Knierum reviewed nematode problems, and concluded that the evidence concerning nematodes is still largely circumstantial in spite of Florida researchers having actually witnessed nematodes doing damage to grass.

Dr. Kenneth Payne, head of the Crop Plant Department, reviewed the changing pattern of research at Michigan State University. Within a year or two, a very complete program is expected, with experts in all phases of lawn work. William Meggitt is assuming weed control responsibility, but will spend less time on screening chemicals and more on fundamental problems. Meggitt is particularly concerned with the ecological approach, competition between plants and the effects of one plant on another.

Dr. Howard showed many slides of disease on various turfgrasses. Dr. James Beard investigated winter injury to turfgrasses, particularly a problem in the Detroit area. Plugs of bluegrass, bentgrass and *Poa annua* were subjected to freezing under a variety of conditions, even immersed in cold water for as much as 90 days; all grasses were fairly tolerant, except when completely iced in a closed container (creating pressure). Of the three, only *Poa annua* succumbed to an alternate freezing-thawing regimen, perhaps the cause of its demise and winter injury as noted in Detroit.

Merion bluegrass was reported to fail under shade, although other grasses, particularly *Poa trivialis*, behaved well. Merion failure may be due both to root competition and to mildew attack. Newport was characterized as tender sod, difficult to lift and move. Delta was reported the fastest greening bluegrass in spring.

Dr. Earl Erickson found little use on turfgrass for a "molecular mulch" of straight-chain fatty alcohols. These prevent evaporation from bodies of water, but seemed ineffective in hurrying establishment of grass stands.

A review of "Silent Spring" by Donald Juchartz suggested this was a biased, but nonetheless important book, and that industry should be on its toes to create a favorable public image through special care not to have pesticide injuries. Dr. Ray Janes stressed that insecticides are dangerous, with newer ones such as disyston, thimet and phorate being as lethal as parathion. He suggested sevin and malathion as two reasonably safe insecticides for general use, but pointed out that soil applications are less hazardous (recommending aldrin, dieldrin and heptachlor at 3 lbs. per acre, or chlordane at 10 lbs.).

INSTITUTE DIRECTOR GIVES PRESENTATIONS AT MICHIGAN CONFERENCE

Dr. Schery was asked to discuss at the 33rd Annual Turfgrass Conference at Michigan State University, "Turfgrass Is Big Business" and "Choose the Grass Variety - -".

The economic importance of turfgrass-related industries was pointed out, with estimates ranging up to $7\frac{1}{2}$ billion dollars annually, perhaps 1% of the GNP. Statistics for several states were cited, and the conclusions developed by the Stanford Research Institute in their Long Range Planning Service Booklet 141 reviewed.

In discussing "the grass for the job", Dr. Schery pointed out that selection of a variety depends as much upon the use to which it will be put and the care it can be given as to any inherent characteristics. He wondered if the average homeowner liked to do lawn "homework" when this required special equipment, extra time, or unusual expense, often necessary with specialized varieties. Schery concluded: " - - it might mean lawn seed mixtures of proven, old-favorite, and perhaps relatively unspecialized varieties, 'for the masses'. In Michigan, economical natural Kentucky bluegrass and fine fescues have certainly proven themselves work-horses in mixtures. Under just average care, this combination fulfills the majority of needs, - -."

There was speculation that perhaps the pendulum has swung too far away from the lawn-type colonial bentgrass varieties, such as Highland. Dr. Schery noted: "Highland - - is one of the easier to keep, and is not the aggressive thatch-builder that are the creeping bentgrasses. - - prejudice against bentgrass (may have arisen) more with creeping strains in mind than Highland type. On the Lawn Institute grounds we have not found Highland aggressive, or pushing bluegrass and fine fescue around much. Perhaps current, high-quality certified Highland bentgrass seed is a better breed from the old-time bent seed that seemed to contain so much creeping stuff. Research centers might well take another look at the erect colonial type bentgrasses, - -."

Dr. Schery continued with analysis of varieties of the major grasses for Michigan, - Kentucky bluegrass, fine fescues, and the bentgrasses. "A mild narrowing of genetic diversity comes with selecting varieties not greatly different from natural bluegrass, such as Park and Arboretum. Park is a result of the combining of a dozen or so especially vigorous strains - -. The seed is carefully produced under agricultural procedures that assure full, plump seed that sprouts quickly, with a lot of seedling vigor." Performance of these quality varieties as winter putting surfaces in the South was mentioned, as possibly a use under stress that would show some distinctive performance differences that don't always show up in the North.

MORE THAN 200 PIECES OF LITERATURE DISTRIBUTED AT TURFGRASS CONFERENCES IN MARCH

At the Maine Turfgrass Conference 100 copies of "Your Outdoor Carpet" and "The Lawn, 1962, Model" were given out. Thirty copies each of the booklets, "10 Frequent Lawn Problems" and "Selecting Lawn Grasses" provided at the request of the university were enthusiastically received. The conference reimbursed the Lawn Institute for them.

At the Michigan Turfgrass Conference about 100 copies of "The Prestige of Quality Turf", "Drench Customers: Advice, Not Prices, Improves Lawn Sales", "For Repeat Sales: - -", and "Answer Questions: - -" were distributed. The entire supply taken almost as soon as laid out.

These experiences emphasize the value of having articles reprinted for follow-up distribution of the stories.

NEW LAWN INSTITUTE STORIES HAVE APPEARED

The March 1963 issue of Building Maintenance & Modernization carried "Put Spring In Your Lawn". The article runs several pages, and is well illustrated. Reprints have been ordered.

The American Cemetery Magazine carried an attractive presentation entitled "Gobs of Good Grass", done for that magazine. Layout suggests suitability for a three-page reprint that would be attractive.

PARK BLUEGRASS SENT TO RESEARCH CENTERS

Sparked by marketing investigation by a team of experts from the University of Minnesota, Institute members in Minnesota asked that the Lawn Institute offer Park in certain southern areas where it might not have been tried. Park bluegrass was offered and is being planted experimentally in Kentucky, southern Ohio and eastern Missouri.

COOPERATIVE EDUCATIONAL PROGRAM IN MICHIGAN

Harry C. Lund, County Extension Director with offices in Midland County, Michigan (Michigan State University), had inquired of available material for a Flower Show his office was sponsoring. He had already decided upon use of the Institute movie, "Bluegrass Beauty".

In addition to this, the slide sequence for "Have A Top Notch Lawn" was supplied Mr. Lund, with appropriate text. This was used for spot presentation at the March 9 show.

In addition, Mr. Lund distributed the following reprints:

- 100 - "The Story of Blue Grass"
- 100 - "Make a Beautiful Lawn"
- 300 - "Lawns, Their Making and Keeping"
- 150 - "Here's How to Build a New Lawn"
- 100 - "What's Ahead for Better Lawns"

- 200 - "Your Outdoor Carpet"
- 50 - "Quality Lawn Seed"
- 100 - "Beauty and the Boast"
- 200 - "The Red, White and Blue of Beauty"
- 300 - "Weeding Lawns"
- 100 - "Lawngress or Weed - Choice is Yours"
- 200 - "Modern Power Mowers"

Mr. Lund writes: "We thank you for your help and interest in making this event a worth-while experience for the homeowners in this community. - - the literature supplied - - was well received." Mr. Lund reported that attendance was very gratifying.

INTEREST IN LAWNGRASS VARIETIES INTENSIFIES

A great many inquiries come to the Lawn Institute office these days, concerning different grass varieties and how to distinguish them. Frequently inquiry is from advertising houses, presumably interested in developing a program for a client.

It is difficult to put into words the distinguishing differences between varieties, since usually this is a matter of performance rather than appearance, and varies from place to place, and season to season. The experts know better than to try to identify a variety with exactitude, from a single specimen plant. Yet the average person finds it difficult to understand how blood lines can be distinct without being distinguishable.

Interest in turfgrass varieties is not only by the non-professional. The subject the Institute Director is asked to talk upon most frequently at turfgrass conferences concerns fine turf varieties and their performance.

WEED STUDIES MAY HAVE MEANING FOR LAWNS

The January issue of "Weeds", journal of the Weed Society of America, is largely devoted to agricultural problems. However, several of the articles might have some bearing upon weeds in turfgrass.

In the study of how quackgrass rhizomes respond to temperature and oxygen, Meyer and Buchholtz found that neither carbon dioxide nor oxygen was of much influence. Bud sprouting started at around 40° F., was at its peak between 68° and 80° F., and declined at higher temperatures. In cultures a herbicidal treatment (NAA) reduced bud activity as did certain other herbicides as well.

Sheets and Shaw reported a detailed study of many forms of triazine (including simazine and atrazine, currently being used on turfgrass in the South). All triazines seemed quite rough on crabgrass, with degree of injury to various crops variable. Effectiveness varied with soil, too.

There has been considerable evidence of the antagonism of phosphorus to arsenicals, especially in crabgrass and annual bluegrass control. A study of Upchurch, Ledbetter and Selman showed an interaction between phosphorus and amitrol, but not with ten other herbicides. There was no testing of pre-emergence arsenicals, however.

In a Nebraska study 2,3,6-trichlorobenzoic acid proved to leach readily from the soil in the course of a season.

A study on effectiveness of herbicides related to droplet size of spray showed, as might be expected, that the more mist-like the spray the more effective the treatment.

The Department of Agriculture, at Beltsville, has initiated a new series of studies relating to the behavior and persistence of herbicides in the soil, something much needed.

INTEREST IN GROWTH REGULATORS NOTED

John Coulter, of Marsteller, Inc., New York City (advertising firm, with Agrico account), called long distance inquiring about Institute impression of growth regulators. Apparently Agrico has been checking into maleic hydrazide, CCC, phosphon, and similar products.

Mr. Coulter was informed about the possibility of these products having merit for inducing premature dormancy in southern grasses, prior to interseeding with northern species. However, Institute experience in previous years with such products has not proven advantageous on bluegrass turf. In the first place, the chemicals must be very carefully and uniformly applied to achieve growth retardation without injury. This may be beyond the capacity of the homeowner.

Secondly, not all vegetation is uniformly affected, because grass much in evidence receives the brunt of the treatment, while vegetation hidden in the sod, or not yet sprouted from seed, remains unaffected. Generally, with grass repressed, the discordant vegetation (weeds) crop up. If there were no weed problem, all equivalent lawngrass, possibly there could be some saved mowing. But with irregular growth from a variety of plant types, mowing must be just as frequent as ever, indeed often more frequent, to maintain an acceptable sod surface.

All in all, we have seen no great promise for general use of growth retardants in turfgrass. Specialty usage may have a place, such as for the southern grasses mentioned above, for use along highways, and for repressing growth of all vegetation around structures (such as under guard rails).

INSTITUTE COOPERATES WITH NATIONAL PLANT FOOD INSTITUTE

Donald Collins, of the National Plant Food Institute Informational Services, telephoned about "emergency" need of photographs to be included in a TV packet going to 250 television farm directors across the nation. Quick assemblage by Mrs. Payne supplied these in time to be included in the NFFI kits. This TV package follows up on one developed about lawns in cooperation with the USDA last September 18, apparently quite successful. The format and production is essentially the same as those we co-sponsored with Encyclopedia Britannica a few years ago, and through which the Institute introduced the National Plant Food Institute to the idea.

"HOW'S YOUR LAWN I.Q.?" FOR SALES TRAINEES

The I. Q. story from last autumn's press kit was recommended in the GIRD Bulletin (Murray Franklin's Garden Institute of Research and Development), and has resulted in numerous requests for copies from leading garden centers throughout the country. Requests have come principally from Delaware, New Jersey, Ohio, Pennsylvania, Wisconsin and similar northern locations, but even so far away as Lafayette, Louisiana. Additional copies of the story were mimeographed, and have been distributed as requested. Other Institute literature is usually included with it.

ROADSIDE MULCH FOR HOME LAWNS

Dr. Robert Hampton of International Paper called long distance from New York, interested in restudying the possible utility of Turfiber as a mulch for lawn seedings. Turfiber is widely sold as a mulch for highway seedings, and has proven a generally effective soil holder, though not too efficient a moisture barrier.

It would still appear that home mulching costs needed to make entry into this market attractive are somewhat higher than a homeowner would like to pay. However, perhaps International Paper will come up with some "junior hydroseeding" method, whereby the mulch is part of a seed-fertilizer slurry that can be sprayed upon the newly prepared lawn.

GREETINGS FROM AFAR

The Lawn Institute recently received a reprint on "Agriculture and Economic Development in India", with the compliments of Professor P. Maheshwari, University of Delhi, in India. Professor Maheshwari would welcome receiving reprints of literature from this country. The Lawn Institute has sent along a few of its more technical releases, although we suppose that India would be more concerned with utilizing land for food crops than for lawns. Still, it is interesting that the Institute's name has reached Delhi.

MICHIGAN STATE UNIVERSITY REQUESTS INSTITUTE MATERIALS

Frank Lessiter, of the Department of Information Services, Michigan State University, requested an Institute press kit which he had heard was being issued at this time of year. Writes Mr. Lessiter: "Such a packet gives me ideas (for interviewing experts) - - and release stories through our service to the press. - - I also have another motive in mind. - - three-four minute television programs - -".

"Bluegrass Beauty" was already being shown this spring by one of the Michigan extension agents, and Dr. Schery suggested this as possibly appropriate for television casting.

GARDEN ARTICLE BRINGS MANY LETTERS

"Anemia In Your Garden", appearing in Flower and Garden Magazine, March, has drawn heavy correspondence. Most inquiries asked where iron chelates might be

purchased, and replies gave opportunity to include literature about lawns and good seed.

"Anemia --" discussed garden plants in general, but did offer opportunity to mention lawns and sponsoring lawngrasses. Although chlorosis is not a problem in lawns over much of the country, occasionally it may occur. The article pointed out: "Proven lawngrasses such as Kentucky bluegrass, fine fescues and Highland bentgrass are seldom anemic if amply fertilized. But lawns may risk chlorosis on alkaline soils from western Kansas to Arizona and eastern Oregon - -. Other grasses not quite so self-reliant as Kentucky bluegrass, may show iron chlorosis if the soil reaction gets somewhat out of balance. - - Centipede lawns in the South frequently turn chlorotic - -".

NEW LAWN MOVIE

In recent years the Lawn Institute office has kept in touch with the National Plant Food Institute, and has offered suggestions on publicity material and the development of a movie. Potential script on the movie was reviewed some months ago. As of early March, the NPF I informs us that the full color film on lawn care, to be called "Beautiful Lawns", has reached the answer print stage. It should be available very shortly.

MISSOURI INTEREST CONTINUES

Les Satterlee, of the Dispatch papers in western Missouri, continues to be most cooperative with the Lawn Institute. In addition to using just about everything in the Institute press kits, Les corresponds from time to time about special items. The latest was with regard to chickweed, often a pest in flower and shrub beds as well as the lawn.

Special write-ups have been prepared for Mr. Satterlee. Invariably by-line authorship and credit is given the Lawn Institute. One of the more recent custom items resulted in a three-column spread, a tear sheet of which Mr. Satterlee sent to the Marysville office, "Renovate Lawns Two Ways". The discussions related to establishing quality grasses in an old turf, and whether it was necessary to kill the existing vegetation first: "Chief unwanted perennials are tall fescue (not to be confused with the desirable fine fescues mentioned earlier) - -. One can attempt to 'outgrow' them with good bluegrass and fine fescues; or clumps - - can be - - spot killed". If chemicals have been used to kill existing unwanted vegetation, the article advises: "bluegrass, fescue or bentgrass seeds find cracks and crevices in loose soil - -. If a mulch - - is used, new seedlings sprout uniformly and quickly".

And finally: "Annual grasses and broadleaf weeds can be checked by encouraging the good bluegrass and fine fescues, through judicious use of selective chemical weed killers".

SAGE ADVICE

Institute members may be interested in a statement made by John Ruskin many years ago, reported by R. C. Morton of Purina in his address to the National Fertilizer Solutions Association convnetion. Ruskin stated: "It is unwise to

pay too much but it is unwise to pay too little. When you pay too little you sometimes lose everything, because the thing you bought was incapable of doing the thing you bought it to do. The common law of business balance prohibits paying a little and getting a lot. It can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run. And if you do that, you will have enough to pay for something better. Nothing is expensive if you get your money's worth."

INSTITUTE STIMULATED?

So often columnists' thoughts on lawns agree with Institute ideas, that we like to think Institute releases responsible. Among good advice from Bert Vincent, in the Knoxville, Tennessee NEWS-SENTINEL, is this: "The first step is good seeds. Don't buy bargain bags of seed. Get the seeds that grow best in your area. Basically, this means planting Kentucky bluegrass mixtures north of the Mason-Dixon line - -."

SHORT SHORT IN COUNCIL BLUFFS NONPAREIL

This short is one of several from the Institute press kit used by the NONPAREIL and other Iowa papers during winter: "Spring seedings have a good chance of success, tests at the Lawn Institute show, if made early enough to establish the bluegrass, fine fescues and Highland bentgrass before hot weather."

ADVICE FOR WISCONSIN

John Buchholz, County Agent, has this advice in several Wisconsin papers: "On loam, clay-loam, or clay soils, use a seed mixture containing 70% of one of the Kentucky bluegrasses. On lighter, sandier soils, use one of the red fescues. Red fescues are more drought resistant than bluegrass and do better under shade and on sandy soil."

NEWSPAPER ENTERPRISE ASSOCIATION STORY WIDELY PLACED

Under the title "Early Start On Lawn Care Pays Off", Allan Swenson has prepared a widely syndicated article on spring lawn tending. We believe Institute releases have been instrumental in Swenson's composition. The article mentions: "Seed bare spots in the lawn early. Grass seed is tough, frost won't hurt it. - - Use Kentucky or Merion bluegrass for sunny spots. Use Pennlawn, Chewings or other red fescue for shade spots. Or use a seed mixture containing these varieties."

INDIANA LAWN ADVICE

Don Scheer, Purdue University extension horticulturist, has been widely quoted in Indiana newspapers for his advice about lawns. Says Scheer: "Correct seed mixtures hold the key to starting a lawn, - - Quality of seed and its proportion in the mixture make the difference between a poor lawn and a good one."

Bluegrass is permanent and adapted to the Midwest - - Make sure the mixture contains at least 50% bluegrass - - for shady areas, bluegrass mixtures containing some red fescue are recommended."

POPULAR KANSAS LAWN BOOK

Circular 327, "Lawns in Kansas", released through the Kansas Agricultural Experiment Station, has been the most popular pamphlet ever printed at the university. 130,000 copies have been printed to date. When visiting Dr. Keen, Dr. Schery picked up one of the latest revisions of the booklet, most attractively done.

The booklet seems to favor cool-season grasses, in general, for the state. "Cool-season grasses may be grown throughout the state but require additional care in less favorable areas." Then again: "Kentucky bluegrass is the most widely used lawngrass in the eastern third of Kansas - -. With good management it will make an excellent lawn. - - Where water is available, it may be grown throughout Kansas, and it has many desirable characteristics. It is hardy and survives well in shade of trees where other grasses fail."

Perhaps areas even as far north as Kansas offer hope for winterseeding sales. In discussing the primarily bermudagrass lawns of southern Kansas, Circular 327 notes: "Mixtures of cool and warm-season grasses offer hope of good lawns in Kansas year around, if properly managed." Again: "Mixtures of warm and cool-season grasses promise good turf the year around. Mixing is accomplished best by seeding cool-season grass into established warm-season sod in September."

The circular also advocates mixtures: "In climates as rigorous and varied as in Kansas, it is unlikely that a single grass will form a satisfactory turf."

MEMBER ISSUES NEW LAWN BOOKLET

The Institute was pleased to receive from The Chas. H. Lilly Company, Seattle, Washington, a copy of their revised booklet "Lilly's Better Lawn Plan." The booklet is attractively designed, and sound information presented. Mr. Paul Kosche indicates that printing of this booklet will probably reach a quarter of a million copies, which should certainly be a tremendous force in development of lawn interest in the Pacific-Northwest. The revision does not side-step questions sometimes considered controversial, and attempts to explain situations for which there's no perfect answer yet, such as *Poa annua*.

Producer members of the Lawn Institute will be pleased to note such answers as this (to the question of whether "Are we limited to coarse ryegrasses and meadow-grasses for rough play lawns?"): "No. Kentucky bluegrass and fine-leaf fescues - when properly fed and cared for - will far surpass the so-called play grasses in both appearance and wearability. It is unnecessary to buy two different seed mixes - one for the back yard and one for the front. Even though quality lawn seed mixtures cost more per pound, they contain far more seeds per pound than the cheap mixtures of large seeds that produce hay grasses. Quality lawn seed is always the better value when you consider the greater coverage and fine turf it gives you."

We feel gratified that the Lawn Institute is mentioned by name in the booklet, and as a source for useful information.

HELPFUL SERVICE

John Jaceckel of Wermen and Schorr Inc. was concerned with the differences between the bluegrass varieties. Replying to this sort of inquiry is a frequent activity of the Institute office.

In appreciation Mr. Jaceckel acknowledged: "Many thanks for getting back to me so quickly and for your help in answering my questions. Your help was most appreciated."

1963 REPRINTS WELL RECEIVED

There has been a gratifying number of requests for reprints by Institute members this spring. 2700 reprints (principally of "Drench Customers: Advice, Not Price, Improves Lawn Sales", "For Repeat Sales: - -", "Weeding Lawns", "Lawns, Their Making & Keeping", "Your Outdoor Carpet") have gone to Kansas City, Missouri, Milwaukee, Wisconsin and Midland, Michigan, for inclusion in mailings to dealers and other interested parties.

THANKS FROM FLORIDA

Dr. Granville C. Horn has acknowledged Lawn Institute cooperation, both for seed and information sent. He writes: "The survey was very interesting and will be valuable to me in future planning. The bluegrasses, especially in mixes, look good. Germination time has been much better this year.

The overseeding that you saw really looks good now. Perhaps we can take a trip to Ponte Vedra when you come and look at that replication."

INTEREST IN LAWN ARTICLE FOR DEALERS

Frank Bartonek, Editor of Lawn/Garden/Outdoor Living, passes along word that the Lawn Beauty Spreader Company of Chicago wished to reprint "A Common Sense Approach to Sales of Lawn Care Products", the Institute article prepared for L/G/O December 1962 issue.

Mr. M. L. Finger, of Schneider Metal, wrote: "This appears to be a very timely and informative article and we were wondering if we could have your approval to reproduce this - - -. It would appear initially that we would forward this to the distributors of our - - spreaders to encourage them to pass these thoughts on to their dealers."

L/G/O policy is to permit reprinting only with full credit and the full article. This Schneider Metal example would seem an excellent way of furthering the Institute's story. We urge quality lawn seed interests to do likewise, with any Institute material circulated.

VOICE OF EXPERIENCE

O. J. Noer, long with the Milwaukee Sewerage Commission, is now associated with a golf course architect and spends most of his time in Florida. It is interesting to note comments from his presentation to the 10th Annual Florida Turfgrass Management Conference, under the heading "Overseeding Bermuda Greens For Winter Play." The Lawn Institute's interest in this subject is apparent from other discussions in this issue of Harvests.

Here are a few extracts from Mr. Noer's presentation, as reported in the Proceedings of the 10th Conference:

"Ryegrass greens are slow by comparison with bentgrass greens in the North. One of the better senior professionals expressed it this way: 'a good ryegrass green is beautiful to behold, but I can't putt them, the ball jumps back at me.' Most northern golfers have the same feeling.

In south Florida - - overseeding may produce surfaces more like a bentgrass green. Farther north overseeding is imperative especially on courses that cater to northern golfers. Right from the start it was evident that ryegrass was not the best grass to use for overseeding in fine-textured bermuda greens. Some tried redtop with indifferent success, others used bentgrass seed only. It was late winter before these greens were at their best. - - others have used a mixture of Kentucky bluegrass, redtop, Astoria and Highland bent, often with Seaside in addition. Seeding rates have been generous. Results have been good because the greens have been popular with golfers.

(Noer goes on to list some of the testing he and the Milorganite people sponsored.) Although Pennlawn fescue was very good - - none of the grasses were satisfactory when used alone. Fescue does not mask Poa annua."

Poa trivialis and Seaside together, or in combination with Kentucky bluegrass and Creeping red fescue, produced the best putting surfaces."

MORE ON FLORIDA WINTERSEEDING

In addition to O. J. Noer's talk, several presentations by experiment station people were given at the 10th Annual Florida Conference. Dr. R. R. Smalley, reporting for the Fort Lauderdale area, concluded Poa trivialis was his best bet. Ryegrasses started well, but faded in mid-winter. Bluegrass was slow starting. The fine fescues were good in mid-winter, as were the bentgrasses. Interestingly, Highland bent rated higher than creeping bents or Astoria from the end of January until well along in March. Highland had the least percentage of disease of any grass in the tests on March 23.

In a companion study at the Gainesville area, reported by Dr. Granville Horn, the fine fescues rate immediately behind Poa trivialis in "best turf" ratings. Admittedly, the test plantings were made too late (December 23) to give slower-starting grasses much of a chance. Dr. Horn states: "blending of two or more grasses tends to complement any shortcomings of one grass." He found no difficulty with transition back to bermudagrass, with any of the fine turfgrasses tested. As to ryegrass, Horn comments: "The absence of ryegrass from the best treatments is quite noticeable. - - its texture and transition disadvantages offset all its advantages."

In a chart giving quality comparisons, a number of mixtures rate the highest possible score. Included were combinations of Highland bent and fine fescue; Kentucky bluegrass and fine fescue; Highland bent, Seaside bent and Kentucky bluegrass; Highland bent, Seaside bent and fine fescue.

SCHOOL SCIENCE FAIR IMPRESSIVE

On March 13 Dr. Schery served as one of the judges at a local Science Fair in Ohio. There seems to be increasing use of such fairs at the urging of the National Science Foundation. As part of the school project, students prepare a paper and an exhibit, intended to acquaint them with experimentation and the scientific method as well as familiarization with subject matter. We wonder if there may not be more of a place for lawngrass in such trials, with many experimental possibilities centering around seed sprouting, competition between species, response to growth conditions, etc. Lawngrasses and lawns have practical implications useful to the student for the rest of his life.

"THE LAWN BOOK" STILL BEING REVIEWED

Dr. Schery's "The Lawn Book", although published in 1961, is still receiving favorable reviews. The latest coming to our attention appeared in the December 1962 issue of Parks & Recreation. Reviewer was Henry Walter, of the Oklahoma City Park Development. Another recent review was by Wilbur H. Garmhausen, for a highway landscape publication. It is gratifying to have the book characterized as: " - - well written, easy to read and understand, and has an answer for nearly all questions pertaining to lawns." (Parks & Recreation).

HEAD OF AGRONOMY SOCIETY APPRECIATIVE

Dr. Glenn W. Burton, President of the Agronomy Society of America, and Principal Geneticist at the Georgia Coastal Plain Experiment Station, recently wrote, thanking us for Institute literature sent him. Says Dr. Burton: "These publications are excellent and should help convince the people that finance your program that it is worthwhile."

TALL FESCUE FORAGE PROBLEM

The December 1962 issue of Economic Botany carried an article by S. G. Yates, "Toxicity of Tall Fescue Forage". There has been widespread incidence of a disease to cattle known as "fescue foot", apparently caused by consumption of the fescue but its exact relationships unknown. It seems not to be infectious between animals. An individual animal may develop lameness of the hind quarters, and eventual gangrene. There have been some recommendations for complete eradication of tall fescue from pastures, particularly in Australia and New Zealand. As research continues in this country, it will be interesting to note whether enthusiasm for tall fescue diminishes in the Southeast, or whether non-toxic varieties of tall fescue may be uncovered. If not, possibly bluegrass will gain some increasing importance in middle latitudes.

CHEMURGY

Studies from the University of California indicate rather interesting results from the ammoniation of sawdust. The resulting material acts both as a fertilizer and a long-lasting soil improver.

Sawdust is first acidulated at a high temperature. If phosphoric acid is used in this process, obviously there will be a phosphorus contribution to the fertility value. The acidulated sawdust is then neutralized with anhydrous ammonia.

The resulting material has a charred appearance but is otherwise like the original sawdust. About half of the nitrogen applied is converted to insoluble form, to make a long-lasting type of fertilizer. Tests have shown that as much as 15 lbs. of actual nitrogen can be applied per M by this means without injury, using a 4% nitrogen sawdust-fertilizer.

Of course there is immediate, rapid response from the soluble portion, after which 4-6 weeks are required until the organic combinations of the other half are mineralized. The sawdust will continue to improve tilth of subsoils over a span of several years.

IMPORTANCE OF SOIL AERATION

Research at the University of California by Letey et al illustrates that the presence of oxygen in the soil is essential, and that results from compaction or waterlogging are not simply compressed soil or presence of standing water. Plants growing in a variety of test soil situations received full oxygen, or a soil atmosphere where nitrogen (inert) substituted in varying degree for oxygen. When oxygen was held to just a few percent, root growth was much retarded, leaves wilted, etc. even when there was no compaction or waterlogging. Interestingly, when oxygen was lacking, the sodium content of growing shoots increased, while the phosphorus and potassium decreased.

INDUCED MUTATION OF KENTUCKY BLUEGRASS

Under this title, Hanson and Juska, of Beltsville, report in the September-October 1962 issue of Crop Science on some radiation studies made with Merion bluegrass some years ago. Subjecting the bluegrass seed to radiation did increase the mutation rate, judged by altered appearance. The authors have previously reported that of all the mutations, only one proved useful. This was development of a single Merion plant resistant to stem rust. But even this had to be abandoned because: "In the spring of 1961, plots of the stem rust-resistant mutant were severely damaged by leaf spot, to an extent which would preclude any consideration for further increase." However, the authors feel that radiation as a technique may be useful in producing new bluegrasses.

PHILIPPINE LAWN

No telling how widely ramified the subject of lawns is these days. A letter from Douglas Hayward, Projects Coordinator of DATA (International Assistance Corps in California), asked if the Lawn Institute might suggest how to solve a mowing

problem in the Philippines. A Peace Corpsman had written about the tediousness of mowing a school yard with bolo knives, inquired about a power mower. It is flattering that DATA was aware of the Lawn Institute.

MORE ANNUAL BLUEGRASS PUBLICITY

Recent moves to declare annual bluegrass a weed find support in the February issue of Horticulture. In the "Now Is The Time" column, there is this advice: "Annual bluegrass which shows up so luxuriously when the lawn is first bare of snow in spring fools many gardeners.

It loves cool weather, often growing throughout the winter but it disappears with the advent of warm weather in late spring. Learn to recognize it and root it out before it dies. Though it has specialized uses, it can be a pest on most lawns."

EARTHWORMS AGAIN

Darwin emphasized the tremendous amount of "cultivation" earthworms do to the soil. Augustson and Peutz, of the University of Wisconsin, undertook a study of the effectiveness of earthworms in disposing of leaves. It was found that earthworms took into their burrows and consumed nearly a million leaves per acre over a six-week period; worm casts at the surface amounted to about 4 tons per acre. It is apparent that where earthworms are abundant, that they constitute a sizable influence on soil dynamics.

INSTITUTE ADVISOR SPEAKS

Dr. Howard J. Dittmer, advisor to the Lawn Institute, University of New Mexico, authored a lengthy article " - - Tips on Care of Lawn", appearing in the Albuquerque, New Mexico JOURNAL. The editor's note along with the by-line listed Dr. Dittmer as "member of the Lawn Institute". Dittmer outlined difficulties in arid country such as Albuquerque mentioning the different grass varieties and means for their care.

COLLEGE STUDENT INQUIRES OF INSTITUTE

"As an undergraduate of Montclair State College, I am working on a project concerning the effects of commercial fertilizers and chemicals on lawn grass. - -. I would appreciate any information which could be obtained on this topic." - Warren Hanke, Wayne, New Jersey. The Institute sent along a miscellaneous assortment of reprints.

KANSAS CITY PRESS KIT PICKUP

The usual fine reception has been accorded the Lawn Institute press kit in the Kansas City area, no doubt through the good offices of Les Satterlee. The North Kansas City PRESS DISPATCH as early as January 3 carried a by-line story.

Mentioned were: "Kentucky bluegrass and fine (red) fescues, chief species for quality lawns, do best if mowed reasonably high (at least $1\frac{1}{2}$ inches), and if fertilized during the cooler parts of the growing season. Bentgrasses such as Highland should be mowed more closely - say about $3/4$ inch."

NORTHERN GRASSES HEARD FROM MORE IN THE SOUTH

M. A. Gardener, of North Carolina State College, in his column "Garden Time" appearing in a number of North Carolina newspapers, had this to advise as late as early January: "Seed Kentucky bluegrass at the rates of 1-2 lbs. per thousand square feet. If fescue - - 3-4 lbs./M - - it is desirable to seed Kentucky bluegrass with the fescue in shaded areas."

"LAWN INSTITUTE" SERIES CONTINUES IN ALBUQUERQUE

A second extensive article appeared in the Albuquerque, New Mexico JOURNAL, under the authorship of Dr. H. J. Dittmer, University of New Mexico, with photograph. As in the first instance, the editor's note credits Dr. Dittmer with his professorship at the university "and a member of the Lawn Institute." Dr. Dittmer does serve on the Institute's Board of Advisors.

In the article we find: "Most individuals prefer a good green lawn in season, and this can be best attained by planting Kentucky bluegrass. This grass will green up earlier in the spring and stay green longer in fall than any of the warm-weather grasses, has less tendency to clump - - and is easier to mow.

"Kentucky bluegrass mixed with fescues. Generally the Kentucky bluegrasses are planted in mixture with creeping red and Chewings fescue - -."

PARK BLUEGRASS FEATURED IN MINNESOTA AND NORTH DAKOTA PAPERS

A number of papers including the Fargo, North Dakota MORNING AND EVENING FORUM, and the St. Cloud, Minnesota TIMES, carried lengthy articles about the development of Park Kentucky bluegrass, and its influence on the economy of northern Minnesota.

GRASSES GET SOME ATTENTION EVEN IN WINTER

From the Schenectady, New York GAZETTE, this advice even in December: "Some of the other grasses, such as Kentucky blue and fescue, are somewhat resistant and break down to the fungus only under most ideal conditions for fungus growth, which occurs infrequently." This was with respect to advice about snow mold.

And this from the Lancaster, Pennsylvania SUNDAY NEWS, along with other mention picked up from the Institute press kit: "A fine fescue-bluegrass turf survives with little watering while some shallow-rooted and annual species may kill out if drought is prolonged."

PRESS KIT FILLERS LONG EFFECTIVE

The page of short fillers with the autumn 1962 press kit has proved a continuing source of mention for the Lawn Institute right through winter. The clipping envelope received in mid-January, reflecting late December and early January pickup, showed two-thirds the clippings to be derived from the short filler items. Newspapers represented ranged from the York, Pennsylvania SUNDAY NEWS, through the Charlotte, North Carolina MUNICIPAL SOUTH, to the Springfield, Missouri LEADER & PRESS.

In the Lancaster, Pennsylvania SUNDAY NEWS, a couple of the "shorts" were combined: viz. "A quality seed mixture based upon Kentucky bluegrass and the Oregon fine fescues needs no help from nursegrass - -.", and "Park bluegrass and Oregon fine fescues sprout about as rapidly as so-called nursegrasses."

Most of the items selected referred to autumn and colder weather. The North Carolina item, for example, advised: "New Kentucky bluegrass lawns not started in autumn could be seeded in winter, according to the Lawn Institute. The seed will sprout when spring warms them."

The following papers also carried the filler items: South Bend, Indiana TRIBUNE, Kansas City, Missouri TIMES, Council Bluffs, Iowa NONPAREIL and Baton Rouge, Louisiana STATE TIMES.

CANADA OFFERS HORTICULTURAL CORRESPONDENCE COURSES

Under covering letter of March 20, the Extension Education Department of the Ontario Agricultural College offers "horticultural correspondence courses for parks, nursery, landscape and commercial floriculture vocations" and "horticultural correspondence courses for the home gardener". Jim Boyce, informed us some time ago that he would be responsible for assisting in the teaching of turf management. He had asked the Institute for printed materials, and was considering using "The Lawn Book" as text.

This extension educational program seems very elaborate. In addition to the three-year professional courses in such subjects as turf management and processing crop production, which involve a number of highly technical courses, there is offered a correspondence course directed to the home gardener. The letter states that its purpose "is to broaden one's academic understanding of horticulture in such a way that we become aware of the reasons behind the practical techniques we use, and thus make gardening an even more enjoyable experience for the horticultural enthusiast." Some 300 persons already hold the Certificate of Proficiency and another 150 are presently enrolled.

Curriculum for the three-year professional course in turf management includes the first year: plant identification; soils, fertilizers and manure; general botany; elementary entomology and pathology; introduction to turf management; and sprinkler irrigation subjects. The second year plant identification continues; plus operation and maintenance of machinery for turf; land surveying and leveling; herbicides, insecticides and fungicides for turf; either plant nutrition or plant physiology; arboriculture. The third year plant identification continues; and there are courses in office management and bookkeeping; personnel relationships and staff management; golf course construction; draftsmanship and basic design; advance turf management; plus a project required of all students.

NEW YORK REVISED RULES ISSUED

The State of New York Circular 826, to replace Circular 788, giving rules and regulations for sale of lawn seeds, appeared recently. For lawn seed mixtures the adoption of "fine-textured grasses" and "coarse kinds" designations is suggested. Bentgrasses, bluegrasses and fine fescues qualify as "fine textured", and others, including redtop, as "coarse kinds".

As to *Poa annua* in lawn seed, it must be named and the number of seeds per pound stated, or be listed on the label as a component crop seed with its percentage by weight and germination shown. Annual bluegrass (*Poa annua*) will also be regarded as a noxious weed seed when present in lawn seed or lawn seed mixtures effective January 1, 1964.

USDA TV RELEASE ON LAWNS

The Lawn Institute office has just received through the good offices of the National Plant Food Institute, the "TV" package on spring lawn care (number 594), under date of March 18, 1963. This was developed in conjunction with the U. S. Department of Agriculture, and carries the identification "produced by Radio and Television Service, Office of Information, U. S. Department of Agriculture, Washington 25, D. C." The Lawn Institute furnished some of the illustrative material in the package.

The package consists of a prepared script, similar to that utilized in prior years with Encyclopedia Britannica. A video cue is given to the left, and the more extensive "audio" (to be read by the announcer) to the right. During recitation the camera plays upon the sequence enclosed of 8 x 11 photos.

Lawn instructions are necessarily brief, and scarcely mention kinds of grasses. Main emphasis is upon fertilization, with suggestion to seek out additional information from the county agent.

FLORIDA TURF CIRCULAR UNDER WAY

Allen Wilson, Ornamental Horticulturist, and Granville Horn, Research Professor, with the University of Florida at Gainesville, have recently requested several photographs from the Lawn Institute for incorporation in a circular they are developing entitled "Building the New Lawn". It'll be interesting to watch for the appearance of this item, since there is a dearth of attractive instructional booklets for the deep South.

NEW ASSOCIATE MEMBERS WELCOMED

Since issuance of the last Harvests, we are pleased to announce The Green Acres Sod Farms and Landscaping Company, Limited, 2050 Old Orchard Avenue, Montreal 28, Quebec, Canada; and the Kellogg Seed Company, 322 East Florida Street, Milwaukee 1, Wisconsin, as Associate members.

NEWS ITEM FOR AMERICAN SOCIETY OF AGRONOMY

Discussion of northern grasses for winterseeding in the South was sent to the American Society of Agronomy, as a contribution from the Industrial Agronomists Committee, of which Dr. Schery is a member. This was tentatively entitled "Fine Northern Turfs Go South For Winter".

Proof was read in February, and it is presumed the article appears in a spring issue of Crops and Soils. The item deals with use of fine fescues, Highland bentgrass and bluegrasses for winterseeding golf greens in the South, and especially the work done by the Milwaukee Sewerage Commission in investigating this usage.

NEW NATIONAL GARDENING SCHOOL PROPOSED

An interesting letter from Cecil F. Carter, Chairman of the Education Committee for the National Association of Gardeners, was recently received, along with his presentation "Horticultural Relationships In The Future Of America". Mr. Carter had been encouraged to explore the possibilities of a national school of horticulture. He states: "Our objective is to create a centralized American institution which will not only have the facilities for superior education but also the capabilities through channels of popular influence, to build a new public image of the gardening professions - -." The Board of Directors of the American Horticultural Society reported favorably on creation of this school, and Mr. Carter was inquiring further for suggestions, opinion and ideas. Such a school would be designed to bridge the gap between the highly theoretical work done at universities, and the practical knowledge needed by workers servicing public grounds, nurseries, and so on.

Dr. Schery answered with a sympathetic letter, indicating that certainly such a school would fill a gap. On the other hand, any practical means for funding so extensive an enterprise would seem hard to come by. The Lawn Institute would be able to lend nothing more than logistic support.

BUGS BARRINGER REQUESTS INSTITUTE MATERIAL

A note from Bugs Barringer, from North Carolina, requested a Lawn Institute feature on getting soils in shape for southern grasses. Dr. Schery composed a brief article on the subject, and suggested Mr. Barringer polish it up to conform with local needs in the Southeast. Mr. Barringer's name has been put on the mailing list for regular receipt of the press kits.

MAILING LIST CHECKED AT MARYSVILLE OFFICE

While Dr. Schery was out of the office on business, Mrs. Payne devoted many days to the checking and perfecting of the Lawn Institute mailing list. The Kansas City files were sent by registered mail to Marysville, so that exact duplication of records exists between Marysville and Kansas City. Mrs. Payne re-organized the list so that names and addresses can be more effectively found in the future, enabling better keeping up to date of this mainstay in Institute activity.

WEST VIRGINIA PAPER RECOMMENDS BLUEGRASS-FINE FESCUE

Noting Dr. Skogley's finding that 50-50 Kentucky bluegrass-fine fescue mixture finds fescue predominating at seeding rates above 4 lbs./M, it is interesting to have this advice from the Martinsburg, West Virginia JOURNAL, in their "Green Thumb" column. "One of the best seed mixtures for West Virginia - - is 80% - - bluegrass and 20% Illahee fescue seeded at the rate of 3-4 lbs./M."

The Lakewood, New Jersey TIMES recommends lower rates: "Spreading grass seed should be done right now, using a 50-50 mixture of Kentucky bluegrass and Pennlawn fescue. About 2 lbs./M is the right amount."

ADVICE TO OMAHANS

The Omaha, Nebraska MORNING WORLD-HERALD carries this advice by Charles Warren, seemingly an adaptation of Institute releases: " - - a combination of Kentucky bluegrass and red fescue usually yields the best all-around lawn in this area. - - In the average lawn some of the lesser grasses may have thinned out. As soon as the weather permits, the lawn should be overseeded with Kentucky bluegrass at the rate of one-half pound to 1000 square feet."

FURTHER ADVICE FOR NEBRASKA

This we find in the Fremont, Nebraska GUIDE & TRIBUNE: "Kentucky bluegrass - a slow starter, but good finisher and considered the backbone of a good turf. A good lawn seed mixture should contain at least 20% Kentucky bluegrass.

Creeping red fescue and Chewings fescue - grow well in drier soils, and are well adapted to severe shade conditions. For shaded areas the fescues should make up 70% of the total mixture."

ILLINOIS ADVISORY

The Champaign, Illinois NEWS-GAZETTE, utilizing the Lawn Institute press kit, has this to say in the March 10 issue: "Kentucky bluegrass-fine fescue lawns thrive on cooler weather. They come back from hidden crowns no matter how rugged the winter. If lesser grasses have thinned, now is the time to upgrade, overseeding with a bluegrass-fine fescue mixture. Bluegrass is especially good for weaving tight sod; the fine fescues are at their hardy best for shade and dry soil. Highland bent is excellent for well kept lawns in moist environments."

CLIPPINGS NOTED FIRST WEEK OF MARCH

Among the 73 clippings picked up in early March by the Institute clipping service, 15 were attributable to the Institute kit. These appeared in the Hutchinson, Kansas NEWS, Willoughby, Ohio NEWS HERALD, Lima, Ohio NEWS, Chicago, Illinois WEEKLY DEFENDER, Cincinnati, Ohio ENQUIRER, Pasco, Washington COLUMBIA BASIN NEWS, New York, New York VILLAGE VOICE, Philadelphia, Pennsylvania INQUIRER, Champaign, Illinois NEWS-GAZETTE, Traverse City, Michigan RECORD EAGLE, Springfield, Missouri LEADER & PRESS, San Rafael, California INDEPENDENT JOURNAL, and Pawtucket, Rhode Island TIMES.

SPRING INTEREST IN "BLUEGRASS BEAUTY"

An unusual number of TV showings have been booked for "Bluegrass Beauty" this spring including WICU, Erie, Penna.; KDKA, Pittsburgh, Penna.; KXLY, Spokane, Washington; KERO, Bakersfield, Calif.; WCPO, Cincinnati, Ohio; WBNS, Columbus, Ohio; KETV, Omaha, Nebraska; KYTV, Springfield, Ohio; WATR, Waterburg, Conn.; WBJA, New York, N. Y.; KFRE, Fresno, Calif.; WTVW, Evansville, Indiana; KUMV, Williston, North Dakota; KMOT, Minot, North Dakota; KLIX, Twin Falls, Idaho; WJPB, Fairmont, West Virginia; KJEO, Fresno, Calif.; WSJV, Elkhart, Indiana; KFVR, Bismarck, North Dakota; KPLR, St. Louis, Missouri; KDSJ, Deadwood, South Dakota; KTVC, Dodge City, Kansas; KRSD, Rapid City, South Dakota; WIBC, Muncie, Indiana; WISH, Indianapolis, Indiana; KCBY, Coos Bay, Oregon; KOTI, Klamath Falls, Oregon; KORK, Las Vegas, Nevada; WLKY, Louisville, Kentucky; KTVH, Wichita, Kansas; KAKE, Wichita, Kansas; KTVO, Ottumwa, Iowa; KVTV, Sioux City, Iowa; KCND, Pembina, North Dakota; KAYS, Hays, Kansas; WRCV, Philadelphia, Penna.; WRCV, Philadelphia, Penna.; KNTV, San Jose, Calif.; KSHO, Las Vegas, Nevada. This is in addition to many showings to live audiences.

WHAT THEY ARE SAYING ABOUT THE INSTITUTE AND ITS RELEASES

"Thanks for sending me the reprint from your recent article 'Remake Your Lawn In Autumn'. This is an excellent article - very well written and illustrated."

William W. Roberts
Agriculturist
American Cyanamid Company
Columbus, Ohio

"Thank you for the various articles, booklets, etc., which I received in the month of November. I have found them very interesting, and the information will be a great asset in promoting sales, understanding, and consultation with customers."

G. Maioni
The Green Acres Sod Farms and Landscaping
Company Limited
Montreal, Quebec, Canada

"Many thanks for your prompt, detailed answer to our inquiry. I'm sure that Life Magazine will be delighted."

John McKelvey
Stanford Research Institute
Menlo Park, California

"I thank you for - - sending the literature. I plan to glean that material today."

John L. Wehling
Extension Plant Pathologist
State of Nebraska
Lincoln, Nebraska

"I find your publications the only answer to the problem of keeping up with changes in lawn making materials and methods."

George E. Creed
Landscape Architect
Cleveland Heights, Ohio

"Thank you so much for the most beneficial information recently received concerning spring lawns. Your service is always most helpful to us in our educational program."

J. Edgar Ferrell, Jr.
Ass't. County Agent
Annapolis, Maryland

" - - your feature 'Anemia In Your Garden' has appeared in Flower & Garden, and was well worth waiting for. - - best thanks again for doing such a fine job."

Gordon Rapp
Wildrick & Miller Inc.
New York, New York

" - - 'Put Spring In Your Lawn' - - will surely create a lot of interest among the more than 52,000 readers who are responsible for the maintenance and care of industrial, institutional and commercial buildings. - - We wish to thank you for the above article."

Jack Pomrening, Managing Editor
Building Maintenance & Modernization
Milwaukee, Wisconsin

"We are very much interested in the copy of your reprint from the Flower and Garden Merchandiser. - - We would appreciate using these in some of our special mailings."

Nacmi Ullom
The Cyclone Seeder Co., Inc.
Urbana, Indiana

"We would appreciate your furnishing us 200 copies of 'For Repeat Sales: - -'
Thank you kindly."

D. L. Klockow
Kellogg Seed Company
Milwaukee, Wisconsin

PRESS QUOTES

"The ravages of winter may knock down - but seldom knock out - fine perennial lawns. Kentucky bluegrass-fine fescue lawns thrive on cooler weather." - Lima, Ohio NEWS

"How About That Lawn? - Spring Thoughts on Landscaping. Kentucky bluegrass combined with fine fescues usually yield the best all-around turf with minimum attention. Park bluegrass can be included for fast sprouting. Highland bentgrass is excellent for moist or watered areas." - Lowell, Massachusetts SUN

"A good seed mixture will be mostly Kentucky bluegrass and fine fescue, with little or no nursegrass." - Earl Aronson, Levelland, Texas SUN-NEWS and TEXAS HERALD; Winchester, Kentucky SUN

"A good haygrass such as tall fescue becomes a weed when it is planted in the lawn. The tall fescues such as Kentucky-31 or Alta are not to be confused with the fine fescues from Oregon such as Chewings, Illahee and Pennlawn. The fine fescues and Kentucky bluegrass are good companions - -." - Lowell, Massachusetts SUN; Peoria, Illinois EVENING JOURNAL STAR; Lima, Ohio NEWS; Peoria, Illinois STAR

"Have patience with early spring lawn seedings. Tests at the Lawn Institute show that Kentucky bluegrass seed kept below 50 degrees F. takes about eight or nine weeks to show green fuzz." - Springfield, Missouri LEADER & PRESS

"According to the Lawn Institute, a good lawn fertilizer for Kentucky bluegrass, fine fescue and bentgrass has about twice as much nitrogen as either phosphorus or potassium." - South Bend, Indiana TRIBUNE

"The yard doesn't look like much without a lawn, according to Dr. Robert W. Schery, director of the Lawn Institute. - - Kentucky bluegrass combined with fine fescues usually yield the best all-around turf with minimum attention. Park bluegrass can be included for fast sprouting. Highland bentgrass is excellent for moist or watered areas." - Springfield, Missouri LEADER & PRESS

"Thanks to modern chemical research, bug bother can be eliminated or substantially reduced. A side advantage to reduction of the bother, according to Dr. Robert W. Schery, Lawn Institute Director, is that elite lawngrasses will prosper when the bug population is reduced." - San Rafael, California INDEPENDENT JOURNAL

"A lawn is a blessing not a burden, points out the Lawn Institute. The lawn adds value, points up landscaping, keeps grime from the door, affords play space and summer 'air conditioning'. A few pounds of a bluegrass seed blend and an occasional mowing is small price to pay for all this." - Hutchinson, Kansas NEWS

" - - Fortunately, quality northern grasses such as Kentucky bluegrass, fine fescues and Highland bentgrass, are reasonably free of bug problems." - Lima, Ohio NEWS

"Lawn seed is a better value than ever before, says the Lawn Institute. Kentucky bluegrass, fine fescues and Highland bentgrass are harvested and cleaned by modern equipment, to sprout more surely and have fewer weeds." - Hutchinson, Kansas NEWS

"The most attractive lawns are those seeded with 'fine-textured' grasses. Among the fine-textured varieties are Kentucky bluegrass (including varieties like Park - - Arboretum), fine fescues (Chewings, Illahee and Pennlawn) and the bentgrasses (both creeping and lawn varieties, such as Highland)." - Lima, Ohio NEWS

"Using seed mixtures broadens the range of lawn conditions under which grasses will thrive. Kentucky bluegrass is an excellent ground cover in favorable locations. But fine fescues help out in the shade, on dry soil or in poor soil spots. There are even advantages in mixing varieties within a species." - Pasco, Washington COLUMBIA BASIN NEWS

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