BETTER LAWN Harvests

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

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KANSAS CITY 5, MISSOURI

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INSTITUTE "SEAL OF APPROVAL" ADVERTISING TIME

NOW AVAILABLE TO THE MEMBERSHIP

Reproduced below are two Lawn Institute advertising mats that have just been developed -- and which are now available at no charge to Members and Associate Members. As you see, these are 2 col. x 4" and 1 col. x 4" in size -- and are ideal for use in local newspaper, magazine or telephone directory advertising. Here is an excellent means for the membership to publicize the Institute, its Seal of Approval -- and at the same time provide an opportunity for consumer identification between Members and the Institute.

Included with this issue of "Harvests" is a Return Card -- for your use in ordering these mats. We strongly urge each Member and Associate Member having or planning a consumer advertising program to order whichever size fits into that program.

Robert W. Schery, Director
The Lawn Institute

MAT #1-62

MAT #2-62

ORDER YOUR MATS FOR DEALER IDENTITY WITH INSTITUTE SEAL OF APPROVAL -- NOW!

Dr. Robert W. Schery, Director of the Lawn Institute, announces additional sales aids for Institute Members and Associate Members, advertising mats that capitalize on their affiliation with the Lawn Institute. The mats are complete advertisements in 1-column and 2-column widths, each providing space for the member to insert his firm name or logotype.

The 1-column mat is keyed with the headline of: "LAND THAT YOU LOVE" appealing to pride of ownership that is one of the major motivating factors for the homeowner to maintain and beautify his property. The 2-column mat plays upon a national pride theme with the line: "AMERICA, THE BEAUTIFUL" and then develops the argument for "climate approved" seed and confidence in the firm displaying the Seal of Approval on its premises and products.

The cover of this issue of HARVESTS shows actual size reproductions of these two mats. Members and Associate Members are urged to review their requirements for these attractive ads - then fill in the enclosed return order card.

"LAWN/GARDEN/OUTDOOR LIVING" INAUGURAL ISSUE CARRIES INSTITUTE SEAL STORY

L/G/OL, a new tabloid-size publication bows in with its first issue featuring a comprehensive story on the Lawn Institute Seal. The story includes a listing of Institute members who have approval for grass seed formulations for the 1962 season, and illustrations of their packages bearing the seal. This first issue bears a March, 1962 dateline.

According to information received from Frank A. Bartonek, well-known editor in the lawn and garden community, his new publication will have an initial circulation of 36,000 and "...will circulate to garden centers, nurseries, rental yards, hardware stores, discount houses, seed and supply outlets, volume buyers for chains, department stores and supermarkets, wholesalers, manufacturers' agents, and manufacturers of products used for lawn care, gardening and outdoor living."

The Lawn Institute Seal story by Mr. Bartonek, developed from material supplied by Dr. Robert Schery, has this to say about the Institute's program:

> "The Lawn Institute is a nationally recognized non-profit association for the development and dissemination of authoritative information on lawns. It is sponsored primarily by quality lawn seed harvesters and processors in the Midwest and in Oregon. It is also affiliated with major lawn seed houses of the East.
>
> "Through this broad affiliation, constant research and participation in turfgrass conferences all over the country, the Lawn Institute is considered well qualified to interpret turfgrass developments in a broad national sense.

"In an effort to upgrade the quality of lawn seed, the Institute board of directors authorized a registered seal of approval, which is awarded only to those seed mixtures which the packagers guarantee will observe the quality standards set by the Institute."

Reprints of this excellent feature on the Lawn Institute can be made available to Members and Associate Members for use in their direct mail advertising or as companion mailers with invoices, etc.

LAWN/GARDEN/OUTDOOR LIVING will be prepared and published by IMPLEMENT & TRACTOR PUBLICATIONS, INC. of Kansas City, a long established and respected firm in the business publications community.

ASSOCIATE MEMBER COMMITTEE HEAD SOLICITS LAWN INSTITUTE MEMBERSHIPS BY LETTER

An outstanding new-membership-recruitment campaign for the Lawn Institute was recently undertaken by Mr. C. Robert Pommer, Vice-President of Corneli Seed Company of St. Louis, Missouri. Mr. Pommer, in consultation with local committee members, prepared a comprehensive two-page letter which explained the history and development of the Lawn Institute, pointing out the benefits and unified approach that membership enjoys through this centralized effort. Mr. Pommer enclosed a copy of Dr. Robert W. Schery's Annual (1961) Meeting Report; reprints of "Quality Lawn Seed" and "What You Should Know About Buying Grass Seed" were also included in order that the potential member might have a greater appreciation of the work performed by the Lawn Institute.

Mr. Pommer's comments about the Seal of Approval and his appeal for joining the Lawn Institute were particularly apropos, and are quoted here for the benefit of those who might wish to sponsor new members:

..."To better illustrate the work that has been done, I am enclosing herewith Dr. Schery's Report To Institute Members And Associate Members At The Annual Meeting - May 20, 1961 - Kansas City, Missouri. In addition, I am enclosing two Lawn Institute reprints entitled, "Quality Lawn Seed" and "What You Should Know About Buying Grass Seed", which are available to Associate Members through the advertising firm of Bozell & Jacobs, Inc.

"...The latest field of activity that The Lawn Institute has entered is the promotion of the Seal of Approval. This is an attempt to upgrade lawn grass mixtures and at the same time, prove to interested authorities that a very earnest attempt is being made by the responsible members of the lawn grass industry to educate the public to the use of better lawn and turf grasses. It is the belief of the members that education in this field will be of more lasting benefit than compulsory action on the part of state or federal authorities.

"...You will be interested to know that the annual dues for Associate Members amounts to only $50.00, plus a nominal royalty charge for those interested in using the Seal of Approval. It is the writer's personal opinion that this money is one of the best investments that anyone can make who is interested in the promotion and use of better lawn and turf grasses, and I shall be very happy if you will advise me that you are interested in joining The Lawn Institute."

We are most grateful to Mr. Pommer for this aggressive recruiting effort to a selected list of non-member firms. It is through such positive efforts that the Lawn Institute can continue to add responsible member firms, and thus render more inclusive services and counsel to its participants.

"CONSUMER REPORTS" PROVIDES TIMELY ADVICE TO CONSUMER ON SEED BUYING

"CONSUMER REPORTS" published by the Consumers Union of New York City, offers excellent advice to its readers on purchasing seed this spring. The Consumers Union consulted Dr. Schery and the Lawn Institute in the fall of 1959, seeking factual and dependable seed-purchasing information for its readers. The REPORTS' most recent article stresses the need for considering the climate and personal situation when buying lawn seeds. The editors zoned the United States into three regions, i.e., Region Number 1 was the "cool season grasses" in the Northeast and Northwest, with the "dry, warm, sunny areas" in the Great Plains region.

Frequent mention is made of the "CU's consultants" and seemingly refers to the Lawn Institute's staff as one of the more dependable sources of information for the article.

The item opens with admonition to consider grass seed in terms of the climate and the personal situation, and refers the reader back to Consumer Reports in September of 1959. Here are a number of advisements contained in the article:

"BUYING LAWN SEED. The appropriate mixtures of seeds rather than a single species substantially reduce the risk of failure. Especially in a yard that has varying soil, shade, or drainage, a mixed lawn is the proper choice--

"FOR GENERAL-PURPOSE USE.
50 to 80 per cent Kentucky bluegrasses
20 to 40 per cent red fescues

"Dry, warm, sunny areas (such as the Great Plains) call for top percentages of Kentucky bluegrass and minimum red fescues --; in cooler areas (such as the Northeast and Northwest), the top percentages of red fescue and a corresponding decrease in bluegrass are preferable. Small percentages of other grasses may be permissible."

Then a compounding for shade mixtures, in which the red fescues are higher in percentage, some rough bluegrass included, and Kentucky bluegrass running from 10 to 50 per cent, is listed.

The table on page 140 is devoted entirely to "Desirable Cool Season Lawn Grasses". The only grasses mentioned are these, in this order: Kentucky bluegrasses, red fescues, Colonial bentgrasses, rough bluegrass. The varities of red fescue grown in Oregon are given prominent mention. Then the advantages and disadvantages and the preferable growing conditions are cited.

The article goes on to review the requirements of listing purity and germination figures on the seed box, then picks up our usual interest points: "Another important consideration, in both price comparison and the development of the lawn, is the size of the various grass seeds. For a given weight, Kentucky bluegrass has - nearly ten times as many as ryegrass --." "Still another consideration should be the percentage of temporary grass seed. Such grasses (usually ryes) can be useful in small amounts to help -- preventing erosion --; but too much of the temporary types will be detrimental to the growth of the more desirable species and to the appearance of the lawn."

"CU's consultants recommend two to five pounds per thousand square feet of a good mixture based on Kentucky bluegrass and red fescue --."

SCHERY TO ADDRESS "TURFGRASS CONFERENCE" MARCH 26-27 AT WISCONSIN

Robert W. Schery, the Lawn Institute's Director, will appear on the Turfgrass Conference Program, March 26-27, to be held at the University of Wisconsin. Dr. Schery has been assigned the topic of: "Turf is Big Business", which will be the opening address on the two-day program. His appearance at this conference was at the invitation of Dr. F. V. Burcalow, Professor of Agronomy, at the University of Wisconsin.

1962 SPRING PRESS KIT WILL FEATURE "BUY GOOD SEED" ARTICLES

The 1962 Spring Press Kit for the Lawn Institute will feature an article by Dr. Schery entitled "Wise Choice of Grass Seed" with an accompanying photograph. Dr. Schery's article places the editor in a position of rendering his readers a very practical service with simple guidelines to follow in buying grass seed. Dr. Schery points out that homeowners should read very carefully the manufacturers' information imprinted on the seed package.

Other articles to be included in the Press Kit will be "For a Good Lawn, Practice Understanding"; "The Lawn and Outdoor Living"; "Which Lawn Grasses Are Out In Front?" and "Lawn Pests Losing Out?"

The last two named articles are particularly timely and contain obvious editor-appeal, in that most readers seek guidance in seed-buying and pest-control at all times, but especially in the spring of the year.

The Press Kit will also contain four excellent reprints of previously published articles. "Ten Spring Lawn Problems" (Popular Gardening); "Big Bargains in Turf" (American Cemetery); "Lawn & Roses Have Needs in Common" (American Rose Magazine) and "There Is a Difference in Grass Seed" (Horticulture) will provide editors with an at-a-glance review of previous editorial interest and at the same time supply excellent general reference material.

Reply Cards will be of two types for the Spring Press Kit. Our established list of publications will receive a special card enabling editors to specify the type of feature they would like to publish in the future, and the newly-added list of editors will receive a card requesting information on the value of photographs, special features, and whether they wish to continue to receive Institute Press Kits.

The Spring Press Kit will be mailed to 700 editors with daily newspapers, garden and consumer publications. Approximately 100 additional press kits will be sent to a recently-acquired list of newspapers, ranging from 20,000 to 175,000-plus circulation.

INSTITUTE PRESS MAILINGS EXPANDED

Expansion of the Institute's mailing lists to include additional newspapers is being completed by Dr. Schery and Bozell & Jacobs, Inc., the Institute's public relations representative. This effort has involved contact with the state press associations in the areas of interest to the Institute. In many cases these associations will arrange for distribution of Institute-prepared materials to the individual member newspapers within the association. In cases where the state associations do not provide this service, the newspaper mailing list has been augmented through the research facilities of Bozell & Jacobs. The first mailing going to these new outlets will be the Lawn Institute's Spring '62 Press Kit, which is currently in production. The newly-added publications range in circulation from 20,000 to 175,000 - and will provide an increased "voice" for the Institute in areas where Kentucky bluegrass, Oregon fescues and Highland bentgrasses flourish.

"POPULAR GARDENING" FEATURES WINTER-FEEDING ARTICLE BY DR. SCHERY

The February, 1962 issue of POPULAR GARDENING features an extensive article by Dr. Robert W. Schery. "Winter Feeding of Lawns" is the appropriate title and appears over Dr. Schery's by-line with direct reference to the test plantings conducted at the Lawn Institute's headquarters in Marysville, Ohio. Written with the use of semi-technical terminology, the article is very timely for the lawn-conscious readers. The following two paragraphs are excerpts from the feature:

"...At the outset, we must emphasize that winter feeding is appropriate only to the bluegrass-fescue lawn. These two species are the mainstays of northern lawns, and to some extent they serve as wintergrasses in the upper South.

"The fine-leaved fescues and bluegrasses build their strength during the cooler months; therefore it is comforting to know that the nutrients are available during this important period. Bluegrass responds to short days with a low growth, so if there is a warm spell, don't expect to see any substantial changes because you have fertilized in the winter..."

PURDUE'S TURF CONFERENCE TO BE ADDRESSED BY DR. SCHERY

"Steps in New Lawn Construction" will be the title of an address before the Midwest Regional Turf Conference by Dr. Robert W. Schery, Lawn Institute Director. The three-day meeting will take place March 5-6-7 at Purdue University in Lafayette, Indiana.

Dr. Schery is appearing on the program at the invitation of Dr. William H. Daniel of Purdue's Department of Agronomy.

"HANDYMAN ENCYCLOPEDIA" REQUESTS LAWN INSTITUTE'S COLOR PHOTOGRAPHS

The Lawn Institute has supplied color photographs to the editors of POPULAR MECHANICS MAGAZINE for possible publication in a forthcoming edition of the "Handyman Encyclopedia" as requested by Mr. Allan Carpenter of this magazine. Dr. Schery has pointed out to Mr. Carpenter that if POPULAR MECHANICS utilizes the colored prints, it will be reported in HARVESTS for the benefit of Institute members who might wish to purchase a personal copy of this encyclopedia.

"10 LAWN PROBLEMS" TITLE FOR POCKET EDITION BY MARY LYNN AND ASSOCIATES.

"10 LAWN PROBLEMS AND WHAT TO DO ABOUT THEM" will be the title of a pocket-size edition authored by Dr. Robert Schery and published by Mary Lynn and Associates. The attractive hard-cover booklet will contain some 32 pages and is well illustrated. Mary Lynn, head of the firm bearing her name, commented that quite often these timely topic books enjoy a 100,000-plus sale. "SELECTING LAWN GRASSES" will be the appropriate title of a second booklet, now being processed.

MR. CLYDE KILPATRICK OF LORIMER, IOWA, JOINS LAWN INSTITUTE

Mr. Clyde Kilpatrick is now a Full Member of the Better Lawn and Turf Institute. Thanks to the efforts of Ken Kiburz, Mr. Kilpatrick is one of our newest members. Recently Mr. Kilpatrick purchased the Creston Seed firm of Creston, Iowa.

CREEPING RED FESCUE COMMISSION HEARING SET FOR FEBRUARY 27TH

The Creeping Red Fescue Commission will appear before the United States Tariff Commission concerning imports, i. e. "being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing the like product". The hearing is scheduled for 10:00 a.m. on February 27, 1962, at the Tariff Commission Building in Washington, D. C.

The amended application is available for public inspection at the Tariff Commission offices in Washington, D. C. The Board of Directors of the Lawn Institute has indicated its support of the fescue position, and offered such services as it can towards successful completion of whatever action the Oregon Fescue Commission decides upon.

"BLUEGRASS BEAUTY" FILM VIEWED BY NEARLY 5 MILLION DURING 1961

"Bluegrass Beauty", which was produced nearly four years ago, has now been viewed by an impressive audience of over 13 million persons. The major portion of this total viewing group was through the medium of television, wherein some 345 telecasts featured the Lawn Institute's film. It is estimated that 13,084,000 viewers saw the film on television. Private audiences such as schools, garden clubs, service clubs, etc. total 104,893 viewers from 1,932 showings of "Bluegrass Beauty".

The Institute's film was shown in most of the states and even traveled as far as Alaska and Canada. Quite often "prime" television times were used, which resulted in invaluable exposure for the Lawn Institute and the entire seed industry. This year, for the first time, the film has been distributed to schools.

SCHERY REPORTS ON 1961 MEETING OF WEED SOCIETY OF AMERICA

Dr. Schery attended the 1961 meeting of the Weed Society of America in St. Louis, Missouri, on December 11th through 14th. His report on this meeting is reproduced here for the benefit of Institute members:

> "As to the general trends in weed control, it looks as though there is no letup in new products, of ever increasing chemical complexity and specific use. The necessary wide testing by competent authorities becomes increasingly difficult under independent office, and it well may be that a number of years of experience will be needed before all facets of use are found out for any given chemical. As far as lawns are concerned, which of the pre-emergence chemicals being advocated for crop plants will find application here, remains to be seen. Certainly there are ample crabgrass preventers available nowadays, so that ultimate dominance of the home lawn market may resolve itself more into a cost and merchandising proposition than a question of competence of a given chemical.

"The newest crabgrass preventer will be Elanco's Trifluralin. This product will be the active ingredient of the Elanco line, effective at the light rate of 1-1/2 pounds per acre. One of the possible hazards with this chemical is that there is danger of burning turf with moderate overdosages, certainly a potential problem if homeowners do not follow directions carefully. But the relatively low rates needed speak for eventual economy in crabgrass prevention that could match post-emergence control.

"Elanco's crabgrass preventer used last year was the safer dipan, which must be employed at the rates of 30 to 40 pounds per acre, however.

"Dow has received label clearance for Zytron (liquid) as a nimblewill preventive, also usable as a crabgrass preventer if applied early enough. Dow will also have aerosol formulations of dalapon, and Zytron-pentachlorophenol for weed control in shrubbery. Aerosol spot spraying of weeds in the lawn with dalapon or amitrol fits in nicely with the idea of spot reseeding to improve turf having some coarse, clumpy grasses.

"A general feeling seems to be shaping up that some of these weed control chemicals are directly stimulative to plants, entirely aside from the help a crop plant or grass automatically receives because the weed is killed. This is a new field, just beginning to be explored by the university researchers. The Lawn Institute has noted from time to time this sort of effect from lawn chemicals such as chlordane and 2,4-D.

"The triazines (such as simazine) seem to be exciting ever more interest, more from the standpoint of general weed control in crops and ornamentals than for lawn use. They are used to some extent with southern turfgrasses, where 2,4-D and DSMA have a stunting effect. I am a little leery about greater employment for turf purposes because of the high toxicity these chemicals carry, and their great longevity in the soil. We have seen on the Lawn Institute grounds here that just a little simazine washed from the driveway on to the lawn can inhibit grass growth for a whole season. Some of the papers dealt with the residual toxicity of simazine in the soil, and methods for counteracting this (such as the addition of calcium polysulfide).

"I found no indications of any selective products for the elimination of coarse grasses such as quackgrass or tall fescue, other than the general killing with dalapon, amitrol, etc. and reseeding.

"Factors affecting weed seed dormancy have been little explored. For example, seeds of lamb's quarters had a much higher percentage of dormancy when they developed under long summer days, rather than under shorter day length. Many weed seeds lived for only a few years when stored in bottles in the laboratory (the basis of much of our seed testing), but remained viable many times as long when in the soil. Some seeds of newly introduced weeds have been found five feet deep in the soil; how did they get there? These are some of the subjects being considered in the area of pure research on weed seed, relatively little investigated up to this time.

"Nor is a great deal understood as to why some weed killers are effective at certain concentrations and under certain conditions, not at others, even on the same plant. Much further study is needed on the molecular level to point up modes of herbicide absorption and effectiveness. Such studies should have a direct bearing upon the tolerance of such plants as lawn grasses, with consequent practical applications.

"It is generally conceded that effective crabgrass killers must have a residual life in the soil of at least a number of weeks, to cover the normal span of crabgrass germination in the spring. Some chemicals, such as the calcium propyl arsonates, are effective only if precisely applied during a relatively short span of crabgrass germination. From the standpoint of the seed industry it seems that we can anticipate general recommendation for new seeding of lawns either a few weeks before, or several weeks after, application of crabgrass preventive chemical. This would fall naturally into a stepped-up campaign for autumn seeding of bluegrass lawns, something we have been attempting in the Lawn Institute. The obvious best use for crabgrass preventers is a late autumn or early spring application, to a turf that has been thoroughly developed from a late August or early September seeding. This is an angle that might be pursued, for the chemical industry would seem to have both a duty and a self-interest in promoting autumn lawn seeding.

"There might be more specific interest in the papers presented in Section 7, 'Weed Control in Turf'. Gallagher reported that calcium propyl arsonate is most effective when applied approximately at the date of first crabgrass emergence.

"Limpel, et al continued to find dacthal and Zytron the best crabgrass herbicides, the former inhibiting germination of new seedings but if applied after the sprouting of quality turfgrasses showed these to have good tolerance of the chemical. It was interesting that dacthal showed increasing susceptibility to injury of fine fescues according to this varietal order - Illahee, Pennlawn, Chewings, Creeping Red. Bluegrass was not injured by even 20 pounds per acre, double the usual rate for control of crabgrass. Spring applications were more effective than autumn, unless autumn applications were at significantly higher rates.

"Eliot Roberts, Institute advisor, Iowa State University, reported Zytron and dacthal among the more effective pre-emergence chemicals, with the newer bandane giving poorer results. Only arsenicals had any degree of permanence in the soil, with a significant longevity the second year. Trifluralin caused burning of the good grass at higher rates.

"Alder, et al reported that dipan, trifluralin, and other Elanco chemicals have proven safe on all southern grass and ornamentals. Crabgrass is very susceptible, so much so that it is their best indicator for concentration of the chemicals in the soil. Elanco has label clearance for pre-emergence crabgrass control with trifluralin at 1-1/2 pounds per acre. Results seem to

indicate that on most soils it is safe to reseed six weeks after use of the chemicals, and there is no harm in scratching the soil surface to make the seeding.

"Dr. J. W. Herron of the University of Kentucky, and Dr. W. H. Daniel, Purdue (Institute advisor) reported on use of Zytron for control of nimblewill, with satisfactory results. Dr. Burt reported upon the use of cacodylic acid (Dimethyl arsonic acid) for lawn renovation and weed control in driveways. With the latter chemical there are a few quite resistant weeds, such as quackgrass, tall fescue, and timothy, which merit repeat treatment.

"So in summary it looks as though we have some pretty good crabgrass killers available, and the future may promise experimentation with other agricultural chemicals for selective elimination of weeds other than crabgrass in the lawn. Techniques may also be found for more certain, quicker results from application."

INSTITUTE RESEARCH AND EXPERIMENTATION FOR PAYGRO AND ZYTRON

For some time the Lawn Institute has been conducting experiments at the Marysville test plots on Paygro, a mulch produced by Mead Paper Company and Dow Chemical Company's Zytron. The following special summaries of these tests have been prepared by Dr. Schery for Institute members and Associate members:

PAYGRO TEST RESULTS

"Paygro" is a shredded bark from hardwoods, a by-product of the Mead Paper Company pulping operations in Central Ohio. It is an attractive dark brown mulch, with pleasant handling characteristics and a "woodsy" odor. It has proved quite useful as a mulch for roses and shrubs, and the Mead Company was interested in learning more of its potentialities as a lawn mulch, as well as gaining further experience with it as a soil amendment and in general mulching. A truck load was given the Lawn Institute for experimentation.

Tests with the material this autumn on new seedings indicated that in general Paygro was not quite so satisfactory as the conventional straw mulch, for bringing up the grass. Its appearance, however, was more attractive. Depending upon availability and cost of straw, Paygro might or might not be preferred. Using straw as the standard of comparison, the Lawn Institute tests indicated that the coarser mesh Paygro was 80% as effective, the fine (dusty) Paygro 65% as effective, judged by the rapidity of progress and uniformity of turf from new seedings. Apparently Paygro did not retain moisture quite so well as did straw, and the finer textured material tended to wash and windrow more readily.

One of the more interesting tests was on reestablishment of grass through new seeding where all turf had been killed by "scorched earth" chemical treatment (as with

cacodylic acid, dalapon, amino triazole, etc.). Experience seemed to indicate that it was impossible to sprinkle sufficiently often to bring up a stand quickly and well solely utilizing the mulch of dead grass that remained after chemical treatment. However, top-dressing with Paygro (which was held in place by the dead stubble) gave improvement on this order:

Treatment	Per Cent Cover in 5 Weeks			
Check, no mulch other than dead grass	50%	20%	30%	15%
Paygro, coarse --	70%	55%	50%	20%
Paygro, fine --	95%	90%	90%	50%

Each of the four vertical columns refers to a different test, involving different seeding and watering rates.

We have found Paygro in two cubic foot bags versatile for many mulching uses, and most attractive. The coarser grade materials should be chosen for mulches, the fines for incorporation into the soil as an amendment or topdressing.

ZYTRON FOR NIMBLEWILL CONTROL

One of the newer and more serious pests in lawns, from Pennsylvania to Missouri, is nimblewill. Being a perennial grass, that makes patches in the lawn of bluish color in summer, dead and brown through most of the colder months, it is not amenable to checking at seed sprouting stage, as is crabgrass.

Fortunately one of the crabgrass chemicals, Zytron (Dow Chemical Company), gave suggestion of effectiveness in controlling nimblewill. Tests undertaken at the Lawn Institute, in cooperation with Dow Chemical Company, has confirmed this to be true. Control is not necessarily 100% perfect, but sizeable elimination of the nimblewill results, especially when the materials are used early in summer just after the nimblewill has begun very active growth.

The Lawn Institute has obtained excellent control with either a single strong application, or two lighter rate applications spaced ten days or so apart. Dow will market Zytron for nimblewill control to be used at the rate of 1 pint per thousand square feet, in two applications.

The earliest Lawn Institute tests with Zytron go back to the autumn of 1959, when it was noted that heavy applications even after nimblewill was dormant gave a modicum of control judged by the following spring's regrowth. Through the subsequent years various rates of Zytron were tried, and in no instance (even at three or four times the currently recommended rate) was there injury to the permanent bluegrass turf. About 20 trials have since been made, the specific ratings and percentage of control for which are in the files, and would be available upon request to any member wishing to learn more about this usage of Zytron.

BEHAVIOR OF BLUEGRASS AS A TURFGRASS DISCUSSED IN "AGRONOMY JOURNAL"

The November-December issue of the AGRONOMY JOURNAL presented four articles relating to bluegrass and its behavior as a turfgrass. Three of the discussions are reviewed below by Dr. Schery, commenting on the published items which were authored by Dr. A. A. Hanson and Dr. F. V. Juska, U.S.D.A., Beltsville, Maryland; and Dr. T. R. Flannagan and Dr. R. J. Bartlett, Vermont Agricultural Experiment Station.

"Dr. Hanson and Dr. Juska report first upon 'Winter Root Activity in Kentucky Bluegrass (Poa pratensis)'. The experimentation proved the generally accepted idea that root and rhizome growth continues through the cold weather of winter, and is increased by autumn fertilization. The authors conclude that because of this growth most of the autumn fertilizer is 'used up' so that additional stimulation is needed by following May.

"The same authors had a study on 'Effects of Interval and Height of Mowing on Growth of Merion and Common Kentucky Bluegrass (Poa pratensis)'. This study was carried out in greenhouse nutrient culture tests, backed up by additional outdoor plantings handled in much the same way. Conclusions were that higher cutting, less frequently, gave increased amounts of leaf growth and roots-plus-rhizomes. The authors felt that under adverse conditions plants having well developed roots and rhizomes would be better able to survive and recover, and thus so should taller-mown bluegrass. The study casts doubt about the admonition to mow frequently, although obviously grass should not be let grow tall and then be mowed (intervals of more than a week when it is growing vigorously). Bluegrass turf was able to come back after dormancy better under high mowing than after low mowing, and to a lesser extent under a weekly mowing regimen rather than a more frequent clipping sequence.

"Juska and Hanson, in 'The Nitrogen Variable in Testing Kentucky Bluegrass Varieties for Turf' conclude that in early stages of the tests, varieties, especially the Merion group, were outstandingly better than natural Kentucky bluegrass, but that this advantage disappeared with the years. It would seem as though the so-called 'improved' varieties are selected for under high fertility conditions, and when not pampered with fertilizer prove themselves no better in the long run. Especially interesting was the fact that Arboretum, a natural selection made in Missouri under non-intensified management conditions, was the only variety having a significantly higher score after three years, both this and natural Kentucky bluegrass rating nearly 15% higher than the Merion group.

"The remaining item is by Dr. T. R. Flannagan and Dr. R. J. Bartlett, agronomists at the Vermont Agricultural Experiment Station, reporting on 'Soil Compaction Associated with Alternating Green and Brown Stripes on Turf'. They observed that where tractor wheels regularly compacted the soil on the University campus that there were greener stripes, marked by high

incidence of white clover. They credit the effects to influence on the bluegrass-clover from the tractor wheels compressing the soil, although the data is not entirely convincing that there may not be simple abrasion factors not considered."

"SEEDING TURF ACREAGES" PREPARED FOR PARK MAINTENANCE.

A forthcoming issue of the PARK MAINTENANCE should contain "Seeding Turf Acreages" by Dr. Robert Schery. The recently completed manuscript is now in the hands of the publishers and reprints will be distributed when available. Dr. Schery discusses newer techniques for mass seeding, especially through the use of large equipment in highway programs. The article also makes a strong plea for lower-growing quality turfgrasses, especially bluegrass and Red fescues, in place of the more customary tall fescue plantings. Also submitted to the PARK MAINTENANCE editors was a photograph of bluegrass-fescue roadside plantings.

"SEED WORLD" FEATURES GARDEN CENTER TIPS BY E. S. ELLETS

The November 24 (1961) SEED WORLD contained some down-to-earth advice for garden center operators in E. S. Ellets' article: "Let's Talk About Garden Center Operations". Mr. Ellets points out that all too often the sales staff of a garden center is not prepared to advise its customers on proper lawn-care methods. Here are some quotes from this well written article:

> "Most of these young people know nothing about gardening and they need information and helpful suggestions if their interest in good lawns and in gardening is to be kept up. And that, it seems to me, is where the garden center operated by an individual who has a background of seeds and of gardening knowledge is going to be a big help. You are going to be able to offer your customers a service which most of the chain operated or discount house garden centers cannot offer because most of their garden centers are not year-round operations.
>
> "--For a while the men took over the power mowing. Now the women are doing it. And because women do not have the mechanical instinct that many men have, they can't or won't tinker around with the mower to get it going as the men so often do, so they want new power mowers more often and they want mowers easy for them to push.
>
> "I'd hate to say that the women are easier to sell than the men; but I do know this. They will ask a lot more questions if it doesn't live up to what you have said it would do after they get it home. You are going to get it right back or you are going to have a very dissatisfied customer who will go around the community telling what a 'gyp' you are. So never get the idea that you can put anything over on a woman customer because it is sure to back-fire. On the other hand, if you please your women customers, give them the little extra information they need and the little extra service they may not ask for but which means a lot to them, you will have some good boosters.

"If I were in the garden center business, one of the first things I would do would be to bolster up my knowledge of gardening. How can you do it? By reading and having available for reference in your garden center by yourself, your staff and your customers authoritative information on lawns and gardens; by attending lectures at men's garden clubs or other groups, given by authorities in the field of gardening and lawn care--."

"LUXURIANT LAWNS" ADVOCATES BLENDS OF KENTUCKY BLUEGRASS, BENTS AND FESCUES

"LUXURIANT LAWNS" published by TFH Publications of Jersey City, N. J., advocates the use of Kentucky Bluegrass, Bents, and Fescues in this 32-page booklet. Offered to the public for thirty-five cents, LUXURIANT LAWNS stresses the point that blends are usually the most successful under average growing conditions. Authored by Mr. Justin Scharff, the booklet reflects many of the accepted practices of the Lawn Institute and Mr. Scharff comments to the effect that Kentucky Bluegrass is possibly number one in the seed-buying public's mind. He further points out that Fescues are desirable because of their ability to thrive under such adverse conditions as poor soils, high acidity and sandy areas. Mr. Scharff also cautions the buyer to scrutinize the analysis tags on the seed packages.

DR. SCHERY TO AUTHOR CHAPTER IN "YOUR GUIDE TO A BETTER LAWN"

"Your Guide To A Better Lawn" is the title of a soon-to-be-published book by the International Minerals and Chemical Corporation and will contain a chapter written by Dr. Schery. The IMCC publication has indicated that both the Lawn Institute and its Director will be given full credit for the chapter entitled: "Species of Grass To Be Used For Various Turf Conditions" and will carry the subheading of "Importance of Good Seed Mixtures". Other chapters are as follows, "Feeding Lawn Grasses", by Dr. W.H. Daniel, Institute advisor at Purdue; "Soil", by Dr. R.P. Thomas, of International Minerals; "Construction of New Lawns", by Dr. James Tyson, the Institute's advisor at Michigan State University; "Renovating Lawns", by Dr. Eliot C. Roberts, the Institute's advisor at Iowa State University; "Mowing, Trimming and Lawn Maintenance", by Dr. J. R. Watson, Toro; "Crabgrass and Weed Control", by Dr. R. R. Davis, the Institute's advisor at the Ohio Agricultural Experimentation Station; "Turf Insects", by Dr. H. B. Petty, University of Illinois; "Controlling Common Lawn Disease", by Dr. M. P. Britton, University of Illinois; "Water for Lawns", by Dr. Fred V. Grau, Maryland.

A few excerpts from Dr. Schery's chapter follow:

"What is important is to know the types of grasses, and just why the particular blend of seeds you buy is necessary--. --There are few modern lawn species not also in grandfather's pasture. Improvements have come mainly in the harvesting, cleaning and handling to provide viable seeds free of troublesome weeds.

"The major northern lawn grasses are the bluegrasses, the fine fescues, and the bentgrasses. -- Tall fescue is sometimes utilized; the 'Kentucky-31' variety should not be confused with either Kentucky bluegrass or red fescue. Tall fescues (Alta and Kentucky-31) may be useful for the roadside and in play areas, but are too coarse for a quality lawn turf.

"There are many bluegrasses, but only Kentucky bluegrass (Poa pratensis) has received much acclaim for lawns. -- Seed of 'wild' or natural Kentucky bluegrass now is harvested in Missouri, Iowa, South Dakota, and other midwestern states as well as Kentucky. Some of the sods are as old as the memory of white man. Natural Kentucky bluegrass from such fields is especially adaptable and durable.

"-- Because bluegrass exhibits a minimum of sexual crossing, most seed comes true. Seed from a well-rogued variety has essentially uniform heredity, and may lack some of the flexibility and wide adaptability that a natural Kentucky bluegrass population has. Arboretum, Delta, Merion, Newport and Park are varieties currently marketed.

"Arboretum is a natural bluegrass blend from Missouri. --Park is a mixture of vigorous Minnesota selections, yielding plump seed that produces robust seedlings.

"Red fescue (Festuca rubra) is the only fescue receiving prominent lawn usage. The red fescues are especially useful when combined with Kentucky bluegrass. The fescue is especially well adapted to dry, shady spots and less fertile soils. The sizable seed yields a seedling almost as fast as nursegrass. Yet it is not so aggressive as would be ryegrass. The best seed mixtures generally have Kentucky bluegrass and red fescue varieties predominating.

"As with Kentucky bluegrass, numerous selections of red fescue have been made, the differences between which are largely physiological. In most instances, varieties are interchangeable for this area. Chewings, Illahee, Pennlawn and Rainier have all performed well. Good quality Creeping Red Fescue also comes from Oregon.

"Bentgrass is a turfgrass gem when kept with the care accorded a golf green. Because requirements for bentgrass are more demanding than for bluegrass and fescue -- close clipping, thinning, disease control, frequent watering and feeding -- it is best planted alone rather than in mixture. --

"The creeping bentgrasses had best be left for the golf green. The Colonial bentgrasses (Agrostis tenuis), including Highland, -- are more erect and adaptable to lawn. --

"The advantages of mixtures have already been covered in the discussion of natural Kentucky bluegrass, itself a mixture of natural strains. Risk is

spread even farther when two or three compatible grasses are blended. Inclusion of fine fescues with bluegrass extends usefulness of the mixture to poorer soils and dry shade.

"There is no point in mixing a multitude of exotic grasses of doubtful longevity. Even worse is the excessive dilution of good seed with cheap nursegrasses. Nursegrasses not only contribute little themselves, but may prevent establishment of the permanent grass."

DR. SCHERY SUPPLIES "SATURDAY EVENING POST" WITH LAWN FEATURE MATERIAL

Institute members will find a forthcoming lawn feature by James A. Skardon of the SATURDAY EVENING POST editorial staff interesting. Several months ago Mr. Skardon visited the Institute's offices in Marysville, Ohio, seeking material and professional information for an early 1962 feature in his magazine.

Mr. Arnold Nicholson, Associate Editor of the POST, has advised Dr. Schery that the forthcoming article should appear in one of the late March issues of POST. It is interesting to note Mr. Skardon's comments (after he had submitted the article for editorial approval) in a letter to Dr. Schery:

"Thanks for the additional material for the Post article on lawns. It was a big help.

The article has been ok'd and is tentatively scheduled for early in March... You can get exact timing from Arnold Nicholson the associate editor who is handling the project. You could also probably order reprints through him if you are interested.

Thanks again for your help."

"THE FAMILY HANDYMAN" TO PUBLISH INSTITUTE'S LAWN ARTICLE IN MARCH-APRIL ISSUE

Word has just been received from Mr. Richard Demske, Associate Editor of THE FAMILY HANDYMAN that his publication will carry an extensive four-page article in the March-April issue. This general lawn feature was prepared by Dr. Schery and re-prints will be circulated if and as received.

LAWN INSTITUTE RECEIVES FREQUENT QUERIES FROM INDIVIDUALS

Quite often the Lawn Institute receives appeals for information from individuals who know of the Institute and its role in the national seed community. This speaks well of the Institute's ever-increasing stature and of awareness of the general public of our programs. Recently Dr. Schery received a request for help from a homeowner in Harvey, Illinois, who was encountering "blotches and patch drying out of Merion".

Dr. Schery's reply to this particular individual contained these comments:

> "I wish I could be encouraging about your Merion bluegrass, but really doubt that much can be done to stop the 'plague'. Your symptoms sound as though it is one of the diseases for which fungicidal control has not proved very effective. I dare say that the pathologists at Urbana might isolate a causal organism, but even then it's hard to know what to do. Possibly occasional preventive spraying with fungicides, such as actidione with thimer, might prove helpful.
>
> "One of the difficulties with highly bred varieties such as Merion is that they lose some of the genetic flexibility and variability that the natural Kentucky bluegrass had. If this were my lawn, along with such treatment as you might undertake, I would bolster seed with bluegrass varieties other than Merion. Natural Kentucky bluegrass, harvested from the fields of the Midwest that have been in existence for many years would be the most economical type, and Park Kentucky bluegrass from a mixture of 12 Minnesota strains would also be good.
>
> "I doubt that your trouble is lack of lime or fertilizer. The problem of lawn disease is quite nebulous, and especially with new varieties of grass (Merion is only a decade old) we haven't even experienced all of the kinds of disease which may eventually afflict the variety. I don't know that a pathologist could certainly identify your disease, but if you cared to send a sod sample to Dr. Malcolm Shurtleff, Turfgrass Research, at the State University in Urbana, he could at least make a firsthand guess for you as to the cause, and even if there may be no ready cure.
>
> "I wish I could be more encouraging, but as you are doubtless aware, seedsmen have long blended different varieties and species to avoid loss of any one kind of grass to some specific epidemic which crops up. Introducing more variety into your lawn would really seem the most practical and economical course."

DR. SCHERY REPORTS ON NORLEA PERENNIAL RYEGRASS TESTS

The following report on Norlea perennial ryegrass was prepared by Dr. Schery for Lawn Institute members and associate members after noting the results obtained in the experimental plots at Marysville, Ohip:

> "...Norlea was planted in comparison with common perennial ryegrass in June of 1960, and has been followed through two summers and one winter since. In this climate the winter hardiness is not too much of a consideration, since common ryegrass in the tests survived the winter the same as did Norlea. I could see this might be an advantage for Norlea in Canada, where it was developed.

"Our test results indicate that in germination and early growth the common perennial ryegrass appears a little more quickly, and seems ahead of the Norlea (thicker, taller) through the first two or three months of spring and early summer.

"By mid-June the slowness of Norlea proves an advantage, for common is tending to throw stemmy seed stalks, and when mowed looks less attractive. Through July Norlea has appeared a somewhat darker green color, more attractive in this respect than common.

"By September both varieties seemed very much alike, and then through October into November common again seemed to have the advantage, with a somewhat longer green season than Norlea. By early November common was definitely more attractive again.

"In summarization it appears as though Norlea is a shorter season variety than common, somewhat of a disadvantage in latitudes such as Central Ohio, south of the area in which and for which Norlea was selected. Since winter hardiness is not a crucial point with us here, there would seem little advantage to the Norlea variety over common. In some seasons Norlea is a little more attractive than is common, but in early spring and autumn the reverse seems the case.

"Kentucky bluegrass mixed into the variety seems to have equal possibility of becoming established, whether in Norlea or common. Thus either variety should be an acceptable nursegrass if used in minor proportions in a seed mixture."

DR. JAMES TYSON REPORTS ON NEW VARIETIES OF TURFGRASS

Dr. James Tyson, Lawn Institute advisor at Michigan State University, recently advanced some views in a communication to Dr. Schery on the issuance of new varieties of turfgrass. Highlights from Dr. Tyson's report are given below. Dr. Tyson has been in an excellent position to test and observe at the University's experimental plots over a period of many years, and is not apt to be stampeded by short term indications.

"....the issuance of new varieties in turfgrass such as new varieties of Kentucky bluegrass is a tough nut to crack. One of the things pointed out by Juska and Hanson is that different grasses should be tested under different fertility conditions for any one location and in addition they should be tested in different climatic areas and under different soil conditions in each. A point in question in the testing of new varieties is what effect the treatments, fertilizers, fungicides, herbicides, and other management factors have on the characteristics of an individual species or strain of grass such as in the case of our testing of common Kentucky, Merion, and Park Kentucky bluegrasses.

"In the trials which we have conducted over a period of approximately seven years' testing these three strains, we have found that Merion bluegrass is absolutely useless when maintained under a low level of nitrogen fertility such as one and one-half pounds during the growing season. -- Thus, for people who are going to give the so-called average care to a lawn, common Kentucky bluegrass is preferable to Merion bluegrass, whereas for those who want to maintain a beautiful, dense turf and they are willing to do the feeding necessary, Merion bluegrass is vastly superior.

"-- Park Kentucky bluegrass, as far as feeding characteristics is concerned, comes halfway between the other two. -- Park and Kentucky bluegrass look very much and act much the same.

"-- from past experience we know that it takes more than one or two years of testing to warrant drawing conclusions as to the advisability of recommending a new strain. Sometimes one strain will appear to be very good and under a different set of conditions may act entirely different."

GOLF GREENS TESTED AND FOUND LOW IN POTASSIUM

A recent article by Dr. J. R. Miller of the University of Maryland, brought to light a definite lack of potassium in golf greens. Dr. Miller's testing appeared in the BETTER CROPS WITH PLANT FOOD, published by the American Potash Institute, under the title of "Turfgrass Needs for Lime and Fertilizer".

In Dr. Miller's findings it is stated that for all of the golf greens tested, the need for phosphorus was small (11%), the need for potassium great (71%). This can be explained in that greens are intensively cared for, with ample fertilizer applied, but the soluble portions (Potassium) are leached away by regular and heavy irrigation.

On new lawns both phosphorus and potassium were generally needed (66% for phosphorus, 74% for potassium). On established lawns, which had probably been fertilized from time to time, 38% of the lawns showed the need for phosphorus, 43% the need for potassium. Golf course fairways were even more marked in phosphorus needs, with 46% of those tested being low in phosphorus, only 27% low in potassium.

In Maryland the majority of lawns, both new and established, would benefit from the additions of lime. The lighter soils of the Coastal Plain were generally low in magnesium, especially new lawns that had not been fertilized. In the Piedmont such secondary elements were more often adequate, only 23% being low in magnesium on new lawns, and 16% on established lawns.

In summary Miller suggests that soils should be tested, limed if below pH of 6.5; complete fertilizers be employed, on established lawns with an approximate balance of NPK in the ratio 2-1-1.

BITUMINOUS EMULSION AND SILK IN PRE-SEEDED MULCH USED IN GERMANY

Information has been received that bituminous emulsion and silk are used in a pre-seed mulch in Germany according to Hessische Saaten GmbH Darmstadt. The formula given is 1 part bituminous emulsion, 1 part silk, 2 parts organic fertilizer, 1 part peat moss, 40 grams per square meter of seed, mixed into 10 parts of water. 15 liters of this is applied to each square meter (about 3 gallons per square yard). It might interest some of our seedhouses to work with firms supplying roadside mulching materials, such as International Paper which markets Turfiber for large scale mulching.

DR. ROBERT SCHERY ATTENDS A.S.A. AND A.S.T.A. MEETINGS IN NEW YORK CITY

Dr. Robert Schery represented the Lawn Institute at the ATLANTIC SEEDSMEN'S ASSOCIATION on November 20 and the Lawn and Turfgrass Division of the AMERICAN SEED TRADE ASSOCIATION on the following day. Also in attendance was Lawn Institute Vice President Edward Spears as well as a number of Associate Members who are members of the Atlantic Seedsmen's Association. Dr. Schery prepared the following comments on these two important annual meetings:

ATLANTIC SEEDSMEN'S ASSOCIATION - November 20

"The Monday program featured a talk on turfgrass diseases by Dr. Houston Couch of Pennsylvania State University. The general tone was that progress is being made in the identification and means of control for turfgrass diseases, and in nematode control. Couch mentioned that Actidione has proved very effective for control of rust on Merion bluegrass, that Merion is suffering from a lot of new die out in recent years in his area (especially on golf course fairways), possibly due either to Fusarium roseum or Helminthosporium sativum. The Fusarium is known to be in almost all turf areas at all times, but had been presumed not disease producing. Use of appropriate fungicides brings about recovery of diseased grasses within a few weeks, bentgrasses especially.

"Couch mentioned a few of the changes that have come about in disease prevention, with the use of more effective fungicides more correctly applied. The problems are perhaps more intense as he sees them, being a pathologist looking for these troubles, and it is doubtful that home owners will be ready in the near future to practice all the disease prevention that such experts might think desirable. If they had to do all this, many would turn to paving or ground cover other than turfgrass.

"Seed control officials, A. Warren Clapp of Massachusetts, and William E. Ozard of New York were on hand, as participants in a panel discussion."

LAWN & TURFGRASS DIVISION, AMERICAN SEED TRADE ASSN. - November 21

"The Lawn and Turfgrass Division sessions on November 21 were a little more directly concerned with the facts of life concerning the turfgrass industry. A motion was introduced recommending that Poa annua be designated a noxious weed, prohibited in seed mixtures marketed interstate through such designation in the amended Federal Seed Act, within tolerances. After considerable discussion, in which the importers took an opposing viewpoint, the motion was passed by an approximate 2 to 1 margin. Mr. Ozard was encouraged to initiate appropriate action such as he thought helpful to the New York State Legislature, now in session.

"Dr. Robert Kalton of Rudy-Patrick Seed Company is chairman of the 'New Varieties Committee' of which Dr. Schery is a member. A lengthy discussion reviewed various viewpoints, leading to no conclusion as to what might be a suitable road to take guaranteeing breeder's rights for new introductions. Kalton gave the major speech of the morning, in which he reviewed the present confused status of this question in turfgrasses, and the lack of any real full-time research that might lead us out of the woods. He also stressed, that with present tools, it would be possible to produce many improved turfgrasses, but that this would be no guarantee of being able to sell them. As a matter of fact, were such breeding ventures to be entirely successful, we would probably lessen rather than increase the total lawn products market, since there would be less need for replanting, weed control, and so on.

"Some real fears were voiced following the presentation by Charles Lee (substituting for Stanley Rollin) of the U.S.D.A., speaking on 'Regulations Affecting Private Turfgrass Breeders'. Apparently Rollin's office is eager to be overseer of new varieties, and would grow proposed varieties under government sponsorship to determine whether there was any discernible difference between newer introductions and old. Only when they were convinced that there was a difference, would the variety be permitted release. Obviously there are practical problems involved, entirely aside from the 'socialistic' influence. Obvious would be the hamstringing of seed increase in commercial marketing until the government had its test and was convinced. Secondarily, there were implications in some of the wording proposed that this sort of thing might be just the first step in government control as to what could and could not be released in the interest of "the public good". Protests from the floor on these and other points were vigorous. It was the speaker's belief that authority for imposing such regulations already exists within the Department of Agriculture, although later on discussion implied that whatever sch scheme is developed should be incorporated into the amendments being advanced now for changes in the Federal Seed Act."

DR. SCHERY REPORTS ON TURFGRASS MANAGEMENT DIVISION OF AGRONOMY MEETING

Dr. Robert Schery attended the American Society of Agronomy 1961 Annual meeting held in St. Louis, Missouri, November 27-30, 1961, and prepared this special report for HARVESTS:

"Drs. Beard and Daniel, Purdue University, reporting upon bentgrass in putting greens, analyzed various complicated forms of nitrogen (amino acids) and found a correlation with temperature. The speculation is that bentgrass root growth might stop at about 85 degrees because of a higher concentration of one amino acid as compared to another.

"Dr. Daniel, with R. Montgomery as co-author, also spoke on putting green mixtures, a matter of more practical concern for people building golf greens. The general conclusion was that with skilled management you can grow good bentgrass on almost any soil, but that certain soil mixes make it easier. The group was alarmed that some of the recent calcined clays being introduced into greens have not been tested long enough to know whether they may deteriorate into an impervious layer.

"Dr. Engel, Lawn Institute advisor at Rutgers, spoke on 'Competition of Turfgrass Species Seeded in Mixture'. His main emphasis was that the red fescues are very competitive, and if planted in sufficient quantity will crowd out not only bluegrass but bentgrass too. Much, of course, would depend upon respective quantities of seeds, and skilled seedsmen know enough to not "over-crowd" a mixture with any given ingredient.

"Ray Lunt, with co-authors Youngner and Clark, University of California, reviewed 'Use of Coated -- Fertilizers on Turfgrass'. Their conclusions were that plastic coatings on fertilizer pellets, could be effective. Lunt had no information on the economics, however.

"Dr. J. H. Madison, University of California, our advisor, spoke on 'The Ecology of Turfgrass Management Practices in Terms of Competition'. I say 'spoke', although his paper was presented by Youngner, since Madison didn't make the meeting. The paper emphasized that watering, frequent mowing, fertilization, etc., permit more plants to survive, but that these are weaker. He had charts relating to which practice was most effective in achieving the particular end result desired realizing that always there must be a compromise between differing practices and effects.

"...Norm Goetz, of Oregon, was appointed last year as the New Variety Committee reported that his committee advocated the need for some uniform testing procedures, but saw no chance for financial support for this at present. He also recommended a better exchange of information between research groups. Upon his recommendation a standing committee was created to survey the work in progress, and give an informal summary report each year on the subject.

"There was some discussion, too, about horticulture departments having a chance to participate in what has so far been mostly an Agronomy show. Apparently horticulturists are agitating for their own turfgrass program in connection with the Horticulture Society meetings, which society meets with the AIBS in autumn."

"LET'S FACE IT -- CRABGRASS IS HERE TO STAY"
by Earl Aronson, AP Newsfeatures

"The man in the store spoke with an authoritative air as he predicted this gardeners' Utopia:

> 'In 10 years, there will be no crabgrass and grasses will be developed to any desired height and stay there.'

"As a clincher, he proclaimed there were plenty of turf experts who should be willing to be quoted along this line.

"We went home. As we looked out over the lawn and garden, there came an autumn vision.

"The power mower was rusting in a corner and I was reclining comfortably in the sun. The lawn resembled a country club green and there wasn't a sign of crabgrass.

"Could the man be right? We checked the experts. Have you been smoking ragweed? one asked.

"All concurred that tremendous strides had been made in crabgrass control. They also said steps had been made toward controlling the growth of grass with chemicals, but that if ever the pipe dream was to come true, it would mean replacing the lawn mower with a power sprayer.

"Director Robert W. Schery of the Lawn Institute, Marysville, Ohio, said he 'hated to be the one to stomp on joyous speculation, but nature is not so easily conquered as your informant seems to imply.'

"Crabgrass, Dr. Schery holds, 'is a prolific, tenacious and ubiquitous species - impossible to stamp out everywhere.'

"Even were it possible to kill every crabgrass for one, two, three or more years, there still would be crabgrass seeds in the soil, since this critter is notorious for having only a few per cent of its seeds sprout each year - then others as these mature, or are turned over in the heaving of topsoil.

"Crabgrass need not be much of a problem, he added, what with excellent pre-emergent and post-emergence control, improved grass seed and more sophistication in lawn tending. He expects it will be a lesser problem than control of some of the perennial invaders...we are planting in cheap seed mixtures for which there is no good control at the moment other than hand-plucking or completely sterilizing the soil before replanting the lawn."

CHICAGO "INSTITUTIONS" QUOTES LAWN INSTITUTE AND DR. SCHERY

The publication INSTITUTIONS of Chicago, Illinois, printed a lengthy article based on material received from the Lawn Institute. The feature was entitled "Autumn Lawn Seeding Is Best" and credited both the Institute and Dr. Schery. Here are a few of the paragraphs as they appeared in INSTITUTIONS:

> "It is the contention of the Lawn Institute -- that the best chance for establishing a good bluegrass-red fescue lawn is from autumn seeding. Bluegrass seed mixtures can be successfully sown in spring, but autumn results are better.
>
> "Although Kentucky bluegrass-fine fescue mixtures do best when sown in autumn, they need the boost of abundant fertility to become well established before freeze-up -- ample fertilizer provides the additional magic for good seed. Kentucky bluegrass and red fescue varieties do not get out of hand from heavy feeding in autumn.
>
> "-- thickens and builds up a bluegrass-red fescue turf without materially increasing mowing problems.
>
> "-- tests at the Lawn Institute have shown that fertilizers applied to frozen ground --
>
> "It takes no expert to detect lawns started in autumn; they are the ones in which the bluegrass and fescue have filled thickly enough so that scarcely a spring weed fights its way through."

CLIPPINGS & GLEANINGS

"...Thank you for sending the Lawn Book. I have enjoyed it immensely.

"One feature of the book I have liked especially, is the cut showing vegetative characters of each species and the description of the vegetative characters. I have been working on vegetative identification of grasses and hope to photograph specimens."

NELSON L. RUSSELL
Associate County Agent
St. Louis County, Missouri

"I am a teacher at the Muncie Trade School and am writing you in hopes of obtaining information and assistance which will help me develop a new course of study in landscaping.

"Therefore, if not asking too much, I would very much appreciate any help you might offer, especially in the way of charts, booklets, instruction manuals, etc. I realize this is asking a great deal, maybe far too much, but if sent these will be utilized for several years as reference materials by both my high school and adult students, and will become a permanent part of my classroom reference library.

"Without the assistance of bureaus such as your own it would be impossible for us to keep ourselves up to date with the development of new products, materials, and practices which are constantly occurring, thereby, depriving our young men of some very essential knowledge.

"As you well know, if required to rely entirely on textbooks, much of the information they contain is already out dated by the time we get them. Whereas, through the use of company literature we are not only able to present our students with the most accurate and modern data available, but some of the very best from an educational viewpoint as well. Then too, there is a vast amount of necessary information which never finds its way into textbooks in the first place, which makes the use of industrial articles even more important to our educational system of today."

SHERMAN L. JOHNSON
Faculty, Muncie Trade School
Muncie, Indiana

"Thank you for the fine glossies sent so promptly, and indeed, those are the turfgrasses that are going to be boosted! An early-spring-edition of O.G. & F. promises to carry regional lawn care. So-see you then!"

MARGUERITE P. KUNKEL
"Organic Gardening & Farming"

"I would very much appreciate receiving this publication (THE LAWN BOOK) as soon as possible. You will recall that Arden Jacklin was very anxious that I should consult this particular book of yours which I am sure is most outstanding..."

MARGARET HERBST
Director of Information
Merion Bluegrass Association.

"Another book, for a man who looks after a lawn is 'THE LAWN BOOK' by Robert W. Schery, published by Macmillan this year for $5.95. Dr. Schery is director of The Lawn Institute, located at Marysville. This, I would say, is the best lawn book in print."

DISPATCH
"Garden Notes" by Harry R. O'Brien
Columbus, Ohio
(December 24, 1961)

"I do hope that next time you are here we can get you long enough to have a luncheon or dinner as there would be so many interested in anything you may be able to say about lawns. I expect a lot of troubles next year as with the depression we are having, people have just not fed their lawns this fall and there is no place this is more important because of the irrigating we have to do. Again I want to repeat how much I enjoy the material you send me and if at any time I can help you in trial experiments or research please let me know."

DR. HOWARD J. DITTMER
Professor of Biology
University of New Mexico

"I appreciate very much getting the material which you sent me. I am sure that I will be able to use most of it on the regular TV show in one way or another. These large size glossy photographs which you refer to will be fine for us; and if it will fit into your schedule, put me down for a regular supply of material which will be seasonal in nature and which I can use. These, I presume, will be mostly camera card material. A good film if it is free from commercial connections, would also be welcome.

"Let me know if you are here at anytime so we can talk further about this."

PAUL B. BERNARD
Farm Director
KMOX-TV, St. Louis, Mo.

"...Keep up the good work. There's much to be done in developing good lawn seed. By that we mean good for the homeowner and good for the supplier, the dealer, et al. There is entirely too much price cutting in order to stay in business."

CHAN BAKER, Seedsman
Miami, Florida

PRESS QUOTES - (Excerpts from stories in the nation's press - many of which reflect and even quote from Institute-prepared materials which are circulated through the seasonal Press Kits and other Institute mailings.)

"Cheap lawn grass mixtures make the poorest and most expensive lawns to keep up. Containing coarse annual grasses, unfit for permanent lawns, they contain large seeds, quick to start, of coarse and tufty growth to crowd out the fine permanent lawn or turfgrasses. Kentucky blue and lawn fescue grasses make most satisfactory fine lawns except in the South, where such as the Bermuda and other varieties are best adapted to permanent lawns."

MORNING GLOBE
Boston, Massachusetts

"The bluegrass of Kentucky and Tennessee has a special place among the aristocrats of the grass family - animals eat bluegrass greedily and cows produce very rich milk and fine flavored butter from its fodder. A cattle breeder of some years ago wrote this about bluegrass: 'Whoever has limestone land has bluegrass; and whoever has bluegrass has the basis of agricultural prosperity; and that man, if he have not the finest horses, cattle and sheep, has no one to blame but himself. He can hardly avoid doing well if he will but try."

LET'S LIVE
Los Angeles
("The Mightiness in Leaves of Grass"
by Royal Lee, Pres. Foundation, etc.)

"The object of this study is to compare solutions of several nitrogenous fertilizers with the same materials applied as solids. Through his experiments, Dr. Nowakowski finds that the nitrate content of permanent and new sown grass is greater with solid fertilizers than with solutions and that by delaying the application of fertilizers, the amount of nitrate increases in the grass."

CAMBRIDGE UNIVERSITY PRESS
Journal of Agricultural Science

"More lawn failures can be attributed to poor seeds than any other cause, according to turf experts. Seed is a small expense compared to the time and other costs you invest in your lawn. You only need to buy good seed once."

ALLEN SWENSON
Baton Rouge - STATE TIMES

"The Lawn Institute is a nationally recognized non-profit association for development and dissemination of authoritative information of lawns."

REPUBLICAN
Springfield, Massachusetts

"-- bluegrass and creeping red fescue are endorsed for good reasons. They grow uniformly, they thrive under continuous short clippings, they resist winter killing, and they have fine leaves."

Ed Cott
IOWA CHRONICLE

"There are three temporary grasses to choose from - Italian rye, Kentucky blue and Redtop. Of the three, Kentucky blue has the nicer color, texture and quality and is relatively free of diseases. --"

TRIBUNE
Tampa, Florida

"Desirable lawn seed mixtures for Pennsylvania contain high amounts of Kentucky or Merion bluegrass and red fescue -- look for undesirable turf species such as ryegrass, timothy, --tall fescue is undesirable in lawn mixtures."

PENNSYLVANIA EXTENSION
SERVICE
REPORTER (Lansdale)
GAZETTE (Bedford)

"Loosen up the soil ... and reseed with Kentucky bluegrass-fescue mixture."

DEMOCRAT & CHRONICLE
Rochester, New York

"Cheap lawn grass mixtures make the poorest and most expensive lawns to keep up. Containing coarse annual grasses, unfit for permanent lawns, they contain large seeds, quick to start, of coarse and tufty growth to crowd out the fine permanent lawn or turfgrasses. Kentucky blue and lawn fescue grasses make the most satisfactory fine lawns except in the South, where such as the bermuda and other single varieties are best adapted for permanent lawns."

STANDARD
Sunnyvale, California

"Kentucky bluegrass is the major turfgrass of the Midwest."

PRESS
Grand Rapids, Michigan

"Look for high percentage of Kentucky bluegrass or Merion Kentucky bluegrass and one of the red fescues. In sunny locations the bluegrasses do best, while in shaded areas the red fescues thrive.

"Red fescues may be listed as Pennlawn, Illahee, common creeping red or Chewings.

"But if you're out to grow a lawn that will be the envy of the neighborhood, reject mixtures that contain Kentucky 31 fescue, Alta or meadow fescue, timothy, or high percentages of the ryegrasses."

Dr. H. W. Indyk
MESSENGER
Allentown, New Jersey

"It pays to use top-quality lawn seed mixtures composed mostly of perennial grasses, Kentucky bluegrasses and red fescues. Read the statement of contents on the package when buying grass seeds. --"

Paul F. Frese
PARENTS MAGAZINE

"Normally Kentucky bluegrass is cut at 1-1/2 inches high and late in the fall the mower is set to cut at 2 inches and kept there until spring when it is lowered again to 1-1/2 inches."

Tobbio Martino
NEWS
Buffalo, New York

"To date, Merion seeded pure and a mixture of Kentucky bluegrass and fescue are outstanding plots. Results indicate they will do well under South Jersey soil conditions."

BUSINESS FARMING
Sea Isle City, New Jersey

"Lawn Institute advises Seeding Lawns in Autumn."

INTELLIGENCE-JOURNAL
Lancaster, Pennsylvania

"Most ready-packed lawn seed mixtures contain a generous amount of Kentucky bluegrass which has long life and good color in summer and fall --."

Arthur Otis
UNION
San Diego, California

"'Cheap seed' is actually expensive because 'cheap seed' is made up of -- ryegrass, or coarse varieties of fescue. Bluegrass, such as Kentucky -- and newer strains, although over a dollar a pound, yield potentially over 2 million plants while a pound of ryegrass has less than one quarter million -- seeds per pound."

Walter Pitzonka
TIMES
Levittown, Pennsylvania

"Plant winter grass now if you plan to keep your lawn bright green during the cool months ahead. There are three temporary grasses to choose from - Italian rye, Kentucky blue and Redtop. Of the three, Kentucky blue has the nicer color, texture and quality and is relatively free of diseases. --"

SUN
Gainesville, Florida

"Desirable lawn seed mixtures for Pennsylvania contain high amounts of Kentucky or Merion bluegrass and red fescue -- look for undesirable turf species such as ryegrass, timothy, -- tall fescue is undesirable in lawn mixtures --."

REPORTER
Lansdale, Pennsylvania

"Seed at rate of about 2 pounds per thousand square feet of a mixture containing predominately or totally Kentucky bluegrass and red fescue."

FLORIDIAN
Marianna, Florida

"The three basic lawn grasses for New York State are Kentucky bluegrass, red fescue and rough bluegrass --."

SENECA COUNTY FARM AND
HOME NEWS
Waterloo, New York

"Desirable lawn seed mixtures for New Jersey contain high amounts of Kentucky or Merion bluegrass and red fescue - look for undesirable turf species such as rye-grass -- tall fescue is undesirable in lawn mixtures --."

NEW JERSEY HOME NEWS
New Brunswick, New Jersey

"Grass seed is generally sold in mixtures of selected grass species. These grasses are compatible and will augment each other in a lawn. Each grass species has certain growth characteristics. For instance Kentucky bluegrass, for best results, is grown in full sun and red fescue --."

SUNDAY NEWS
New Hampshire

"Kentucky bluegrass (or mixture with red fescue) should be seeded --. Mowing should start when bluegrass and fescues -- are at least 1-1/2 inches high --. Cool season grasses, the kind best suited for this area are easiest to start in fall."

MORNING GAZETTE
Billings, Montana

"If a fine textured (lawn) is wanted then the seed should be limited to the blue-grasses, Chewings and creeping red fescue."

Bill Youngman
WASHINGTON STAR

"It's not too hard now, if good quality seed is used for the red fescue varieties make quick cover, while the Kentucky bluegrass knits a tight sod by its vaunted rhizoming, says Dr. Robert W. Schery, Director of the Lawn Institute, Kansas City."

CLAUDE M. GRAY
Walla Walla, Washington

"You might also request pamphlets of The Lawn Institute, Suite 600, 1016 Baltimore Street, Kansas City 5, Missouri."

STAR-LEDGER
Newark, New Jersey

"George Ziegler, University of Wisconsin Horticulturist, says that common Kentucky bluegrass is a good choice for a new lawn .... Ziegler suggests that if you buy a grass seed mix, buy one that contains at least 60 to 70% bluegrass. Don't buy a grass that contains Kentucky fescue or Kentucky 31 fescue or tall fescue or Alta fescue. These will persist in lawns as weeds. The same holds -- for ryegrass. -- Seed about two or three pounds of bluegrass - increase the seeding rate slightly if you are planting (fine) fescue along with the bluegrass."

Sun Prairie,
Wisconsin STAR

"Kentucky bluegrass-fine fescue seed mixtures do best when sown in autumn, but need the boost of abundant fertility to become well established before freeze-up. -- Nor do Kentucky bluegrass and red fescue varieties get out of hand from heavy feeding in autumn. At this time of year it is normal for bluegrass to produce low, short leaves in response to declining day length, --. Tests at the Lawn Institute have shown that fertilizers applied to frozen ground -- have a beneficial influence."

Tom Carlson
JANESVILLE GAZETTE
Wisconsin

"Best chance for establishing a good bluegrass-red fescue lawn is from autumn seeding. That is the contention of The Lawn Institute, -- bluegrass seed mixtures can be successfully sown in spring, but autumn results are even better."

HAMMOND TIMES
Indiana

"The unidentified blight strikes Merion bluegrass, a strain which was adopted by golf clubs all over the country after its recommendation by the U. S. Golf Association -- . Large acreages have begun dying out recently. Since the seed is expensive, golf courses are losing not only fairways but a sizable economic investment."

STAR-LEDGER
Newark, New Jersey

"Since only a few grasses are recommended for use in this area - Kentucky and Merion bluegrass, creeping red and Chewings fescues, obviously the others contained in most mixtures are open to question."

Bill Youngman
STAR
Washington, D. C.

"By reading the label, you can tell the percentage of each kind of seed, and the percentage of the seed that is expected to germinate. In this area the mixture should contain large amounts of Kentucky bluegrass (or varieties) and red fescue."

JOURNAL-STANDARD
Freeport, Illinois

"There are many advantages to autumn seeding of lawns but paramount is the fact that Kentucky bluegrass, fine fescues and Highland Bentgrass perform best during the cooler weather of autumn and spring while the weeds don't."

EVENING UNION-BULLETIN
Walla Walla, Washington

"Various strains of Kentucky bluegrass are most often considered the basic grass for lawns in the Cedar Rapids area -- Kentucky bluegrass forms a dense sod with dark green leaves which are smooth. It has many good points --."

Cedar Rapids GAZETTE
Iowa

"Seed mixtures may merit The Lawn Institute 'seal of approval' as a guide to adequacy."

TIMES
Trenton, New Jersey

"There are many advantages to autumn seeding, but paramount is the fact that Kentucky bluegrass, fine fescues and Highland bentgrass perform best during the cooler weather of fall and spring, while the weeds don't."

GAZETTE-MAIL
Charleston, West Virginia

"A mixture of Kentucky bluegrass and red fescue is good for the shade. These grasses are started now. Never use ryegrass with fescue or bluegrass, they grow during the same season and the ryegrass will choke out the fescue and bluegrass."

NEWS & OBSERVER
Raleigh, North Carolina

INSTITUTE GRASSES MAKE HEADLINES AROUND THE NATION

"LAWN INSTITUTE ADVISES SEEDING LAWNS IN AUTUMN" -- New Era, Lancaster, Pennsylvania

"KENTUCKY BLUEGRASS IS POPULAR FOR LAWN" -- Bee, Sacramento, California

"KENTUCKY GRASS TOPS" -- News Examiner, Connorsville, Indiana

"BLUEGRASS-RED FESCUE MIX BEST FOR PERMANENT LAWN" -- Advance, Dover, New York

"KENTUCKY BLUEGRASS TOPS" - Enterprise & Times, Brockton, Massachusetts

"BENTGRASS, FINE FESCUE RATED BEST FOR OREGON LAWNS" -- Capital-Journal, Salem, Oregon