

## BETTER LAWN - - HARVESTS

Published periodically by  
Better Lawn & Turf Institute

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Phone: (513) 642-1777

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October, 1972

### SYNDICATED STORY APPEARS

We are very pleased to find the Institute press materials again used by Earl Aronson, Associated Press Newsfeatures, in his widely printed story appearing in newspapers all over the country. This autumn Earl chose the title Fall's Best Time to Improve Lawn. A few quotations from the widely circulated release will indicate the fine "mileage" the Institute receives through Mr. Aronson, with direct mention of many grass varieties, viz.:

"When it comes to lawns, few experts are better equipped to give advice than Dr. Robert Schery, director of the Lawn Institute, Marysville, Ohio. With this in mind we asked questions and received the following replies." --- "What is the best seed mixture to use? Consider local environment. Rainy areas and close-mowing favor bentgrass; colonial bentgrasses such as Highland, Exeter and Holfior are easier to care for ---" " --- might be mixed with the new low-growing bluegrasses such as Fylking, Pennstar and Sodco. Most lawns, however, will be seeded to bluegrass predominating for sunny areas and the fescue for shady spots." -- "Among fine new fescue grasses on the market are Cascade, Highlight, Jamestown and Ruby. They join Chewings, Illahee and Pennlawn, among familiar names."

### REQUEST FROM ITALY

The Ansaloni firm of Bologna, Italy asked the Institute for "a list of such varieties belonging to /perennial ryegrass, fine fescue, Kentucky bluegrass and bentgrasses/" as might be suited for sale in Europe. Mr. Ansaloni indicates that European seedsmen are beginning to offer select varieties the same as in the United States. A list of the acceptances by the Lawn Institute Variety Review Board was sent to Mr. Ansaloni as a courtesy, along with a color transparency for use on the cover of a pamphlet the firm is publishing. The Ansaloni firm has been helpful in the past, especially regarding historical aspects of bluegrass in Italy.

### CLIPPINGS CATCH

Without a hired clipping service the Institute can't monitor press kit use nationally, but occasional clips come our way or are noted in the Columbus, Ohio papers. Evidence of usage appears on the following page.



### INSTITUTE REPRINT OFFERED

"Doc" Abraham, syndicated garden columnist (The Green Thumb) and television personality (WOKR-TV, Rochester, New York) has again offered his audience an Institute reprint, "New Grasses Dramatize Lawn Renovation" from Landscape Industry. There is no distribution cost to the Institute for this, other than the modest cost of the reprint itself. Abraham estimates that he will have 2,000 or more requests as a result of the offering. We are most pleased to have this discussion of fine new turfgrass varieties brought to the attention of a select gardening audience.

### USDA YEARBOOK APPEARS

The 1972 Yearbook of Agriculture ignores the farming farmer and woos the city dweller. Entitled "Landscape For Living", the 1972 Yearbook concerns itself entirely with the urbanized setting. This trend reflects the high status currently enjoyed by lawngrasses and ornamentals.

A number of useful presentations for the home gardener appear in the book. Lawns and lawngrasses receive attention, but of much more limited extent than other aspects of horticulture. Juska and Kreitlow discuss lawngrasses (including varieties), indicating regions of adaptation. Kreitlow, App and Engel review lawngrass care, especially with respect to pests. A few other items have indirect relevance for lawns, such as the discussions on soils and seed quality. Of course the many landscaping items involve turfgrass but it is seldom a focal point.

A lengthy section of articles deals with the plant use for "social betterment" (inner city, schools, public housing, etc.), of rather little informational value for plant growing. Scores of color plates introduce the book, "pretty" but doubtfully instructive for the text; the value of this expenditure might be questioned. The 250 pages following the introduction do contain a wide range of information that should prove valuable as a reference for those interested in gardening and the landscape.

### PUBLICATION MAKES A STRONG CASE

We were especially impressed with the summer issue of Better Crops With Plant Food (Potash Institute of North America) for its "Facts From Our Environment" section. In a forthright manner a lengthy series of questions relating to fertilizer and pesticide influence on the environment was tackled, quoting authorities, and providing much factual information that will prove useful in countering some of the emotional environmental outbursts. Intensive agriculture makes possible not only the freeing of manpower for other constructive activities, but of additional land thus not required to support the population (which, if put into cultivation, would be a major cause for pollution and impingement on "wild" lands). This issue is a handy fact book to have at hand.

### PLANTS FOR MAN, SECOND EDITION

Dr. Schery's economic botany textbook, Plants For Man, was published in August as a second edition. Lawngrasses and seed production receive attention in Chapter 21, Institute photographs appearing.



Weekend gardener

# Bluegrass how to select

Times-Post Service

The best time to repair a bluegrass lawn

to start a new one is during the

August or the first two w

In fact, it is the only r

seeding bluegrass. Sod

successfully almost any t

Late summer is best for

gives the grass the

good root

GARDEN GOSSIP:

Autumn Is Ideal Time

For Lawn Improvement

By EARL ARONSON

AP Newsfeatures

When it comes to lawns, few

experts are better equipped to

give advice than Dr. Robert W.

Schery, director of the

Institute, Marysville, we asked

With this in mind, we received the

questions and received the

following replies.

Q. Is autumn a good

time to improve a lawn?

A. Yes, for northern

lawns, autumn is the best

time to start a new lawn.

Q. What are the advantages

of starting a new lawn in autumn?

A. The soil is not soggy, ch

of the soil is not soggy, ch

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Reprinted - Herald, 8-19-72

Do it thoroughly. Soak the area with the  
sprinkler to settle the soil. When it dries out  
somewhat, you are ready to seed.  
critical factor in seed germination is  
oxygen and suitable tem-  
perature. A mature seed  
embryo. If the  
it starts

YOUR GARDEN  
GARDEN SECTION  
Fertilizing Lawn Cover  
In September Yard Prog

By IRWIN and  
MARTHA JONES  
Dispatch Garden Writers  
We have just received the  
latest public lawn informa-  
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For many years Dr.  
Schery and other lawn spe-  
cialists have stated that au-  
tumn is the best season for  
fertilizing established lawns  
for lawn renovation and  
making new lawns in  
northern two-thirds of  
United States. In the  
early September is  
time to begin the p

applied. According to Dr.  
Schery tests at the institute  
have shown that such ferti-  
lizer applied at up to twice  
the usual rate caused no  
harm but caused the blue-  
grass to be deni-  
color and mor-  
the following spr.

See LAWN on  
page 10

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in the renovation of  
an old lawn is cut the old  
vegetation as low as possi-  
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established the proper h-  
erbicide should be applied.  
If a herbicide has  
long-lasting effects is  
the application shou-  
made about a month  
new grass seed i-  
ground or heavy t-  
not germinate  
two inches shou-  
prepared.

By DR. ROBERT W. SCHERY  
The Lawn Institute  
In our ecological era, a lot of  
single crop variety, the individ-  
ual plants all alike.  
Monoculture is unusual in na-  
ture; both prairies and forests  
typically contain a mixture of  
species. Changing nature's sys-  
tem to monoculture brings some  
advantages, as well as ob-

Continued from P  
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their nitrogen as urea  
In the soil the nitrogen  
slowly released by micro-  
action and is available  
plant use over a long pe-  
od. Fertilizers which ha-  
most of their nitrogen  
quick release forms are no  
recommended.

Only highest quality grass  
seed should be sown. The  
law requires that the  
tainer list the  
of each

Highland is a typical col-  
onial bentgrass, best adapt-  
ed to locations that are  
naturally humid, or which  
can be regularly watered in  
drier climates. Bentgrasses  
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than fescues, and a three-  
fourth inch mowing height  
is quite acceptable for High-  
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course has better color if  
rewarded with a regular  
fare of nitrogen ("non-burn"  
plant foods are especially  
appropriate for carpet-like  
bentgrasses, so dense that  
fertilizer granules may not  
sift through to the soil).

Weekend gardener

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### IN PRINT AND PREPARATION

During the quarter three lawn stories under Institute authorship have appeared in national publications, and have been reprinted for distribution to members and in mailings. These were: "Turfgrass Cultivars", American Horticulturist; "Avoid Summer Brownout", The Gardener and "New Lawngrasses Applauded", American Rose Magazine. In addition "Environmental Restrictions Affect Lawnseed Costs" appeared in the Ohio Turfgrass Newsletter, and has been distributed. Several members have asked for additional reprints, and one firm undertook the distribution of 7,500 reprints of the American Horticulturist story for its own account.

Additionally, prepared during the quarter, for publication in the near future are these items: a series of stories for the ASTA supplement, which will be issued nationally to newspapers in the spring season; "Establishing a New Lawn -- Pictorial Guide", Brooklyn Botanic Handbook; "The Labor-Saving Plant Food", Weeds, Trees and Turf; "High Fever Over Cool Lawns", The Gardener; "The Fine Turfgrasses", Flower and Garden; and "Lawns on the Upgrade", Resort Management. Tentatively scheduled is a lawn ecology study for Natural History magazine if time permits the necessary working up of this relatively technical piece.

### INSTITUTE LITERATURE USED IN MICHIGAN, CALIFORNIA

Stan Beikmann, Horticulturist with Fernwood Incorporated (Niles, Michigan) compliments the Institute, "While horticulturist at Kingswood Center I enjoyed reading your press releases --- I found this material quite valuable in answering homeowners questions --- . Accumulation -- makes a nice reference --- invaluable in my classes for homeowners and lectures."

Dr. B. Rateaver, California State University of Sacramento, invited the Institute to participate in an "International Conference" for farm and garden. He asks, "Could you send some sample literature and info? I am teaching here -- university level -- and need to build up the files". Literature has been sent for class use.

### PRESS KIT MAILED

The 1972 autumn press kit was mailed July 19 to a select group of over 1,000 editors, garden writers and Institute members. Four reprints were included ("All-Purpose Fertilizer Suits Roses to a Tea", "Try Autumn For Lawn Renovation", "The Changing Lawn Scene", and "Lawngrass Proprietaries Come of Age").

Twenty pages of individual stories and a covering letter constituted the body of the kit. The stories ranged from 2-page presentations to short filler items. This year fine turfgrasses were related to ecology, lawn care, fertilization, and renovation. Each of the grasses represented on the Variety Review Board list received specific mention, usually in headline. It will be noticed in the sample clippings reproduced on another page that varietal names are conspicuously represented.



### "TURFGRASS CULTIVARS" APPEARS

A review of turfgrass cultivars appeared in the American Horticulturist, journal of the American Horticultural Society. The different methods of selection and breeding of turfgrass varieties was the focus of attention. Discussions are perhaps a bit technical for a popular audience, but it is good to have on record with so prestigious a society a listing of the fine turfgrasses and the varieties approved by the Institute's Variety Review Board. A boxed insert makes the varieties readily identifiable to anyone glancing at the story, and a five-picture insert adds interest. One member firm ordered 7,500 copies of this story for private distribution.

### CALIFORNIA BULLETIN

"Lawn Planting and Care in Ventura County" is the title of an attractive bulletin authored by R. L. Baldwin and S. T. Cockerham, California. Because of California's highly varied and peculiar climate, bulletins for an area so small as a county are especially useful.

Creation of the lawn, -- grading and so on, -- receives conventional coverage. Choice of grass is covered mainly by a two-page chart, in which the different grasses, their advantages, disadvantages, maintenance and special considerations are discussed. The author's state, "In general, most lawns in Ventura county are bluegrass, bermudagrass, or dichondra." Remaining discussions in the booklet are directed chiefly to these species.

Instructions on planting a lawn reflect the California climate, where moisture comes mostly from irrigation. In lawn seeding a rolling before and after a mulch is applied is suggested, on the assumption that irrigation rate can be regulated to result in insoak without soil wash (in the East a loose surface is usually preferable, receiving rain better). Recommendations on mowing are about as for the East, as is fertilization. Much emphasis is on watering, and the aid that lawn aeration lends towards achieving insoak of water as well as reduction of thatch. Final sections deal with pest control and diagnosis of troubles.

### NEW VARIETIES APPLAUDED

The September issue of The American Rose magazine, appearing in late August, carried the Institute story, "New Lawngrasses Applauded". The editors chose to emphasize the new varieties (on the Institute's Variety Review Board approval list) by capitalizing and bold-facing, making the names stand out prominently. Three photographs were used, showing contrasting coarse and fine texture turf, three fine fescue culms, and Penn-cross bentgrass. Leading up to discussion of the individual species and varieties, the text states, "Almost all new lawngrass cultivars are improvements over the common types ---".

### EDITOR RESPONDS

Sunday editor (LaClaire T. Wood), Poughkeepsie Journal (N.Y.), wrote thanking the Institute for the PK. "We do use articles -- for our farm and environment pages -- We would be very interested in receiving photographs, -- to illustrate your articles --". Several photos were dispatched to editor Wood.



### NEW YORK STATE FAIR HANDOUTS

Again this year Richard H. Swart, Men's Garden Club of Syracuse, has written the Institute for information utilized in their "Lawn Clinic" booth at the fair. Manned by club members, the booth is visited by several thousand people during the course of the fair. Literature is handed out to those showing interest, and the occasional visitors showing serious interest in lawns (Mr. Swart says that most of them are women) are provided "in depth" discussion by club members at the booth. Especially for the latter the club likes to have more than the usual mimeographed handout, and is in the habit of using Institute reprints. This year "Lawn Renovation the Modern Way"; "Slow-Release Fertilizer For Lawns"; "Try Autumn For Lawn Renovation"; "Anti-Pollution, Ward For Weeds?"; and "New Turf Varieties Bred to Resist Disease" have been sent to Mr. Swart for distribution.

### LAWNSEED PRODUCTION STORY

The Institute story, "Environmental Restrictions Affect Lawnseed Costs", appeared in the July issue of The Ohio Turfgrass Foundation Newsletter. The story pointed out that pollution problems in distant seed-producing parts of the country have a bearing on the price charged for high quality seed in consuming areas. The story is an attempt to show that higher seed costs are not the result of profiteering, but due to higher costs imposed by measures taken for the public good and due to public insistence.

### VEGETATION CONTROLS POLLUTION

"The Role of Plants in Improving the Environment", by Paul E. Waggoner, first presented to the AAAS as part of an environmental symposium, was published in April-June Journal of Environmental Quality. While the discussion deals more with arborescent vegetation than with turf, the principles nevertheless apply. Waggoner indicates how effective vegetation is in helping control pollution, including the freeing of the atmosphere from ozone and sulfur dioxide. A good article from which to select "authoritative quotes" in furthering the cause of pollution control by planting vegetational cover.

### IN THE GARDENER

"Avoid Summer Brownout in the Lawn" was the title of an Institute story which appeared in the Men's Garden Club journal, The Gardener. Reprints were scheduled, and widely distributed. One member ordered 5,000 copies for firm distribution.

The story opens considering summer problems of the lawn, and cites mowing heights appropriate to different species. Diseases are discussed briefly, and the position taken that, "The newer grass cultivars have been chosen primarily for resistance to lawn diseases; even some of the traditional varieties such as Arboretum bluegrass, were selected for ability to withstand summer adversity a bit better than the run of the mill turf."



### NEWSPAPER SUPPLEMENT PLANNED

The annual "Lawns and Gardens" newspaper supplement is planned for the spring of 1973 as in past years, sponsored by several associations including the American Seed Trade. Bob Falasca of ASTA has asked the Institute to supply copy and pictures on lawns and turfgrasses, for use in this supplement (mailed to thousands of newspapers all over the country). Several stories and filler items have been furnished Mr. Falasca, for editing through early winter and release amply ahead of the spring sales season. We are delighted to have this means for extending Institute coverage without cost other than staff time.

### SOUTH CAROLINA BOOKLET

Circular 528, under date of May, 1972, "Cool-Season Grasses For South Carolina Piedmont Lawns", has recently appeared. We often forget that South Carolina, because of high elevations in the West, can utilize northern grasses. Dr. Ledebor, author of the pamphlet, especially recommends tall fescue and Kentucky bluegrass (the improved varieties), with possible use of fine fescues and colonial bentgrasses in shaded locations. Seeding is strongly recommended for autumn only. Recommendations for establishment and care are traditional. Counting covers, this is a 20 page booklet, with an attractive color front.

### LAWNS HELP COPE WITH POLLUTION

The Institute has supplied Brantwood Publications (Nursery Business, Landscape Industry) with several turfgrass stories. They are publishers also of Environmental Age Newsletter. We were pleased to note in the initial issue (August) reference to lawns, under the heading "Lawns Are Pollution Fighters". Perhaps the Institute press kit had something to do with the item, which extols the lawn for the beneficial effects it has upon the environment (absorbs pollutants, releases oxygen, reduces run-off, etc., etc.)?

### SOUND EXTENSION ADVICE

We are pleased to note this statement in "Garden Guides" issued by the New York Cooperative Extension Department: "There is no such thing as a seed bargain. --- If you insist on using a cheap blend, remember that your lawn may not look like a million --- It will be necessary for you to add to it each year. --- Be sure to use a high quality seed ---".

### MASSACHUSETTS TURF BULLETIN

"Improving an Old Lawn" was the lead story in the summer issue of the Massachusetts Turf Bulletin. Although authorship is not cited, the text has a familiar ring, and we believe it was composed from Institute releases. Sample quote: "Traditional bluegrasses and fine fescue are best mowed at no lower than 1½-inches. (New cultivars - like Fylking, Pennstar, Baron and Sodco tolerate clipping at an inch or less). Colonial bentgrasses such as Highland mow neatly at 3/4 inch ---".



### LAWN STORIES POPULAR

"It is interesting to note that your articles and pictures and the other ASTA material have been receiving the greatest usage by the newspaper as indicated by the request for photograph copies." Robert J. Falasca, ASTA.

Later, another note from Mr. Falasca -- "This is to acknowledge receipt of your articles and pictures for the 1973 Lawn and Garden Supplement. Thank you for your prompt attention to this."

### ROADSIDE SEEDING SLIDE SET

The American Society of Agronomy is developing a slide series for teaching use, on roadside seeding. The Institute has contributed several slides for consideration, depicting Ohio experimentation sponsored by the Institute a few years ago (all "fine-textured" medians from planting of a seed mix of equal proportions, on seed count basis, of bluegrass-fine fescue-Highland bentgrass). We hope that Institute participation in this project will result in attention being given to better quality seed for roadside and rough land sowing.

### PK FILLERS APPEAR

Not only are lengthy items included in our press kits, but also shorter items that are handy fillers for many of our garden editors. Two of these shorties were used in the September 3, 1972 Columbus Dispatch. In part they read: " -- now is the best time of the year to reseed bare areas in the lawn, fertilize established lawns, renovate old lawns or to make new ones". "Use only high quality lawnseed. Do not use any seed mixtures which contain any weed seeds or coarse fescues."

### LITERATURE APPRECIATED

"Thank you too for the reprints. You write in a very down to earth way that really appeals to both amateur and professional alike." J. R. Fults, Colorado State University.

### SAMPLE REQUEST

L. E. Whitehead, Lombard, Ill., recently wrote the Institute -- "An item in the 'Edison Garden News' issued by the Commonwealth Edison Employee Garden Club, stated that leaflets giving the latest in new blue-grasses, fescues, bentgrasses, and ryegrasses would be sent if a self-addressed, stamped envelope was enclosed." Of course the request was honored.

### ADVISORY TO APPEAR

An advisory on weed control has been prepared for a government agency, the section on turf being written by Barbara Emerson of Amchem. A draft of the intended text was sent to the Institute for review by Dr. Schery, offering chance to make suggestions concerning better turfgrasses and proper fertilization in the program of turf weed control.



### IN BEACON-NEWS

The Institute's "How to Select Lawngrasses" appeared in Chicagoland and we are grateful to Seaboard for sending in a tearsheet.

Sample quote: " --- a few touted bluegrasses and fine fescue varieties may be combined, perhaps with some of the new perennial ryegrasses for quick catch. For humid climates a natural bentgrass variety such as Highland itself contains types of slightly varying heredity."

### NITROGEN UPTAKE BY PLANTS

Research reported by Wisconsin workers in the Sept.-Oct. Agronomy Journal indicates that a combination of ammonium nitrogen and nitrate nitrogen is absorbed better by growing plants than either form alone. Several studies have indicated differential absorption of ammonium over nitrate, and it is often assumed that ammonium is oxidized to nitrate before plant absorption. Apparently neither extreme prevails generally, and both ammonium and nitrate are taken up at the same time to the advantage of the crop.

### MISSOURI LITERATURE RELEASED

A series of leaflets has been distributed through the Agronomy Society exchange of literature, from the University of Missouri. Included are "Thatch -- Enemy of Lawns", "Lawn and Turf Weed Control -- 1972", "Bluegrass and Fescue Lawns -- Establishment", "Bluegrass and Fescue Lawns -- Maintenance Calendar", and "Improving Lawn and Landscape Soils".

The recommendations are standard for this rather difficult climatic region, but their leaflets are very attractively done and written in expressive language understandable by a homeowner. A number of the more troublesome weeds are figured as drawings, with herbicide controls given in chart form. The leaflet on soils is directed more towards tree and shrub plantings than towards turf.

In discussing "bluegrass and fescue lawns", many of the modern varieties are listed. For best quality lawns Fylking, Pennstar and Prato are suggested, Merion only in blends. Pennlawn is cited as the best red fescue. Tall fescue and perennial ryegrass are also listed, with Manhattan said to be very good among the perennial ryegrasses.

Maintenance of "Bluegrass and Fescue Lawns" is typical of the southern reaches of the bluegrass belt, with autumn fertilization suggested rather than that in hot weather. October fertilization is recommended for prolonging good color into winter.

### BLUEGRASS RESPONSE TO SLOPE

Bennett, Mathias and Henderlong, reporting in the Sept-Oct. Agronomy Journal, note that bluegrass yield (under a series of fertilization rates) was more than twice as abundant on north-facing slopes as on south-facing ones. The studies were made in West Virginia on 35% slopes.



### LATE SEASON FERTILIZATION OF ST. AUGUSTINE

Reeves and McBee, Texas, report in the July-August Agronomy Journal, on the influence of late season fertilization. In general late fertilization kept st. augustine grass green longer into winter, and caused it to green more quickly in spring. Apparently there was very little winter loss of grass plants due to generous fertilization, although more top growth was killed when nitrogen was liberally used. Where concentration of nitrogen was high, the grass compensated by increasing its phosphorus and potassium content.

### LAWN INSERT

An eight page insert appeared in Flower and Garden magazine, August issue, under the heading of "Lawns". Staff-prepared, much of the information seemed to have been from Institute releases (even to the point of citing Adelphi Kentucky bluegrass as "Nassau", when this change caught us in mid-printing some months ago). Most of the other proprietary grasses currently accepted by the Variety Review Board are named, including in addition to many bluegrasses, Pennlawn, Highlight, Jamestown, Wintergreen and Ruby fine fescues; Manhattan, and NK-100 ryegrasses; Highland, Exeter and Penncross bentgrasses; and several of the southern grasses.

The text of the insert is nicely expressed and well illustrated, and there are no serious mis-statements with which to quarrel (the last section "New Concepts in Lawn Services" is, however, not a critical evaluation of the usefulness of these franchised operations). Earlier sections included reasons for lawn failure, kind of lawn to choose, soil, planting methods, upgrading poor lawns, buying lawnseed, and various maintenance procedures. The insert provides a helpful short lawn advisory, although the paper on which it is printed appears not of durable quality. We are pleased to see this insert so much along the lines of Institute thinking and interests.

### MORE ON WINTERSEEDING

G. C. Horn, Florida, has a story in the Aug.-Sept. Golf Superintendent entitled "Farewell to Poa Annua?" Horn extols a carefully regulated pre-emergence chemical program, which if properly carried out, virtually eliminates Poa annua as a pest in bermudagrass. Kerb is the preferred herbicide.

Perhaps of particular interest to seedsmen is the statement that where Poa annua is prevalent overseeding should be chiefly with ryegrass (to better compete with the Poa annua, and more nearly match its color); while where Poa annua is not prevalent, the finer-textured grasses (a bentgrass-fescue-bluegrass combination is recommended by the University of Florida) are preferred because, among other advantages, they give it a better putting surface.

Seedsmen interested in the winterseeding market of the Southeast may want to review this article.



### CHINCHBUG CONTROL

A report in the Dow, Down to Earth, indicates that Dursban is an unusually effective insecticide for control of chinchbug, a single application at 1 lb./A early in the season serving to inhibit even the following over-wintering population. The research was conducted by Rutgers University entomologists. TVA tests show Dursban to be effective in control of ticks, too.

### FERTILIZATION STUDIES ON PENNCROSS BENTGRASS

Pennsylvania researchers report in the Sept.-Oct, 1972 Agronomy Journal on the effect of nitrogen and potassium sources on performance of Penncross creeping bentgrass. The studies involve comparison of urea, Agrinite, Milorganite, Uramite and Nitroform; and two types of potassium. The resulting differences in nutrient content, either of foliage or the soil, seemed not to be critical, even though significant under certain circumstances. Certain secondary elements were influenced differentially by the nitrogen sources, and long-term there was some growth response due to potassium applications.

### FERTILIZATION LESSENS DISEASE

Research reported by Goss and Gould, Washington, in the Sports Turf Research Institute Journal, show that adequate nitrogen greatly reduces the levels of Red Thread disease on fescue and bentgrass. Secondly potassium and some applications of phosphorus help reduce disease, but the influence of nitrogen is overriding.

### AMERICAN HORTICULTURAL SOCIETY COMMENTS

O. Keister Evans, Executive Director of The American Horticultural Society writes: "Dear Bob, -- Yours is certainly a viewpoint worth considering --- I think you have countered nicely with the wealth of information you furnished readers of the summer issue of the American Horticulturist /"Turfgrass Cultivars" ---".

### GRASS GROWING GREAT

This autumn was especially rainy on the Institute grounds, and the grasses have grown exuberantly. Greatest bother in September was to keep them properly mowed. For the most part the new cultivars have withstood disease and weed invasion well in spite of the humid weather.

It has been a great summer to profit from the use of ureaform nitrogen in turf fertilizer.



OHIO STATE UNIVERSITY TURFGRASS FIELD DAY

On August 2 the Ohio State University Agronomy Department held its annual turfgrass field day in Columbus, Ohio, more heavily attended than ever before. Plantings at the "new" research grounds are entering their third year, and so far most trials are insufficiently old to provide any conclusive answers. Except that fine fescues do not prosper under the Columbus conditions, and in summer display considerable patchiness and rapid invasion by bluegrass, varietal comparisons all look very good and are the focal point of the demonstrations.

An extensive series of "golf greens" having controlled irrigation and collection of the leachate are ready for planting in an irrigation study to begin soon. Nematodes have shown up on the grounds, and the nematologist is applying test chemicals (so far without any visible benefit to the turf). Other studies involve Grozyme (a fermentation product with bacteria added used to speed decay and eliminate odors), which may be influential in increasing water infiltration or speeding breakdown of thatch. Disease control on bentgrass turf employs various of the new fungicides, but even the checks exhibited little disease at this display and no conclusions are voiced.

Plantings in the shade are now 1½ years old, and are perhaps the most interesting of the exhibits. So far Fylking, Pennstar and A-34 bluegrasses have shown the best shade tolerance, moreso than fine fescues. Most bentgrasses as well as fescues were doing poorly, and some of the perennial ryegrasses (viz. Norlea) were a "disaster", having been entirely lost. Kenblue bluegrass and Poa trivialis were fair. If these investigations follow the pattern of those undertaken in Michigan some years ago, the fescues can be expected to make a comeback in comparison to the bluegrasses in the next year or two.

There are almost no visual differences in studies involving the use of nitrogen sources on bluegrass and bentgrass, the most recent fertilization generally showing up as slightly darker green grass. The only conclusion fairly evident is that the more generous the fertilization, the better seem to be the turf (the less the weed invasion).

In the variety trials, all grasses looked exceedingly good at this occasion, with trivial differences between the "best" and the "worst". Thus preferences voiced were mainly based upon texture, color, and other personal likes or dislikes. All of the perennial ryegrass cultivars looked excellent, all very much alike, a bit better than "common". There was little to choose from between fine fescues, which on the whole were not doing too well (as noted above). A small group of tall fescue cultivars is under test, some of them with markedly finer texture than the familiar Kentucky-31: K-8-155 and N6-95 code selections were particularly outstanding in this respect.

Bluegrass varieties comprise the most extensive cultivar comparisons, and excite the most interest (many sod growers attend, and partly develop future plans on the basis of test plot appearances). As noted above, all grasses looked excellent at this time, probably the result of a good growing year plus the professional attention and irrigation they receive. There has not been time for debilitating disease and weed epidemics to develop on these relatively new plantings. The bluegrasses are maintained



### OHIO STATE UNIVERSITY TURFGRASS FIELD DAY Continued

at two cutting heights, 3/4 inch and 1½ inches. Even the lower cutting height looked good. Arista and Prato seemed excellent, and Nugget was again outstanding (although not so dark a green as earlier in the year). Dark green varieties attract the most attention, and New Jersey P-56 was the darkest under test. Of course Adelphi and Bonnieblue are both rather dark green, and received much favorable comment. Sodco looked excellent, as did Fylking, Pennstar, etc. Dr. Niehaus conducted the groups over the bluegrass variety trials, and being from Wooster most of his comments related to his experience there. He stated that the outstanding blends at Wooster contained Fylking or Pennstar, and were excellent no matter what else was mixed with these cultivars. In response to numerous inquiries from the crowd he commented that Baron has performed excellently there, although this cultivar was not entered in the original planting at Columbus for some unexplained reason.

The bentgrass cultivars are all kept mowed at ½ inch, whether the colonial type or creeping. This, of course, is to the disadvantage of the colonial sorts, and Highland, Exeter and Holfior had an inferior appearance compared to creeping bentgrasses such as Penncross (all creepers looked good on this occasion). Kingstown velvet bentgrass seemed to be rather badly invaded by neighboring clones, and is apparently not aggressive in sustaining itself.

### VEGETATION AND CLIMATE-POLLUTION

With widely dispersed publicity about how much oxygen an acre of grass (or other vegetation) produces (and sustains "so-many" men), publication of Inadvertent Climate Modification, a Report of the Study of Man's Impact on Climate sponsored by MIT, will be of interest. Oxygen release by growing grass does refresh the air, and the vital nature of oxygen for breathing does arouse interest; but the implications are fallacious. For each unit of oxygen produced by green leaf in sunlight, a corresponding unit of carbohydrate is also produced, which, as it decays, uses up essentially an equivalent amount of free oxygen. Therefore production and consumption are in balance (no net gain of oxygen), and in any event oxygen production would be negative at night and during the dormant season.

Climate Modification can help develop a sounder scientific rationale. There are many ways in which vegetation influences the local climate and pollution. The withdrawal of carbon dioxide from the air is perhaps as important a function of photosynthesis as is the release of oxygen! Carbon dioxide content is increasing rather rapidly due to the burning of fossil fuels, and if its concentration (presently about 0.032 percent) doubles, the earth's temperature is expected to rise 2° C, -- enough to trigger arctic ice melt and many other warming tendencies. Vegetation can perhaps tie up an appreciable amount of the carbon dioxide on land areas (the ocean is a sizeable sink for carbon dioxide), preventing this and avoiding submergence of coastal cities! In any event the book makes clear that there is no danger of oxygen deficiency, sufficient occurring in the atmosphere so that even were all fossil fuels completely burned the draw-down of oxygen would be less than 1 percent.



## MISSOURI TURF CONFERENCE

Proceedings of the 12th Annual Lawn and Turf Conference, University of Missouri, held late in 1971, were recently received. The reports make a voluminous (66 pages) book reminiscent of the Purdue University Conferences of some years ago. Like the Purdue conferences of that era, much new technical information is being divulged in "virgin country" where in-depth conferences are relatively new (this was the 12th annual Missouri conference, and only within the last few years has the University had any staff working exclusively with turf).

It is not possible to review all presentations, but a few highlights might be of interest. Dr. J. D. Butler, formerly of Illinois (now Colorado) pointed out some of the upcoming "ecological" problems including use of salt on highways as well as the more familiar pesticide concerns. We are only beginning to really investigate some of the more subtle ecological upsets caused by man (viz. use of a material to control one problem creating another).

Dr. J. H. Dunn, reviewed the research presently underway at Columbia. His preliminary ratings of bluegrasses show Fylking, Sodco, Bonnieblue and some of the Warren vegetative selections to be "good to excellent"; Primo, Prato, Windsor, Southport, Campus, Arista, Pennstar and Cougar "fair to good"; Merion, Park, Nugget, Newport, South Dakota, and Kenblue among the "poor to fair". He speculates that there may be some direct effect of Missouri summer weather causing certain bluegrasses to show stress, rather than indirect effect through disease. A less extensive evaluation is devoted to tall fescues and bentgrasses. Zoysia is increasingly of interest as people have become somewhat disenchanted with (U-3) bermudagrass in Missouri climate. But winter-tolerant bermudagrass would seem to have a place. Benefin and DCPA have proven safe to use as pre-emergence crabgrass control with bermudagrass, whereas bensulide, siduron and triazines have given poor results (although apparently they can be used with zoysia). Extensive tests have been underway to control yellow nutsedge, with arsonate, 2,4-D, and dicamba (frequently in combination) having given pretty good control if used repeatedly.

A number of papers deal with such subjects as winterhardiness, zoysia seed germination, bluegrass growth habits, planting bluegrass vegetatively, seeding it in summer, holding *Poa annua* through summer, eliminating *Poa annua*, and so on. Dr. L. M. Callahan, Tennessee, presented two papers of excellent quality, one on the maintenance of bentgrass vis-a-vis *Poa annua*, and another on sod webworms. Re the former, Callahan states, "We have used several organic and slow release forms but have preferred the urea-formaldehyde materials. The rate of release may not be too uniform the first year but we find that by the third year rate of release is quite uniform. ---".

Sod webworms are apparently an increasingly troublesome problem with turf in all parts of the transition zone. Chlorinated hydrocarbons fail to give general control any longer, and there is even evidence that their use intensifies the problem (probably by reducing webworm predators without killing the webworms). Callahan reported in depth on webworm in Tennessee. The webworms are quite sensitive to hot sunlight, and often die from the exposure they have created in eating the grass. In mixed plantings webworms first ate all of the young ryegrass, then Kentucky

(Continued)



### MISSOURI TURF CONFERENCE Continued

bluegrass and last of all attacked the fescues. The incubation period for eggs to hatch ranged from as little as one week in warm weather to 3 weeks or more when temperatures were below 60 degrees F.

Other papers dealt with biological control of pests, moles, disease problems (Dr. Butler took up individually leafspot, mildew, stripe smut, fusarium, rust, pythium and fairy ring), dutch elm disease, use of re-claimed water, and efficient utilization of equipment.

### TURF RESEARCH ANNUAL

The 1972 "Turf Research and Irrigation Annual" appeared as the July issue of Park Maintenance. Coverage was considerably slimmed down compared to former issues, and this means of reviewing turfgrass research may have seen its better days. Nevertheless such items as are reviewed are of interest.

Hardison, of Oregon, speaks highly of the Eli-Lilly code fungicide EL-279, as a preventive of both flag and stripe smut. Michigan research on snowmold indicated only two bluegrass cultivars (Adorno and Monopoly) to show significant resistance, although the New Jersey hybrids (including Adelphi and Bonnieblue) rated fairly well. Several non-mercurial fungicides were effective for prevention of snowmold on bentgrass in Wisconsin, including chloroneb and Dyrene combinations, and Calo-clor. Topsin, a patented product (from Japan), is reported to control many diseases on all grasses.

With respect to fertilization, Ledebor's research in South Carolina indicated advantages from generous feedings in autumn on cool season grasses, with no disadvantage so far as winter hardiness is concerned. He found no advantage to phosphorus in the winter-seeding of southern turf. Rhode Island research indicated that early autumn fertilization reduced cold resistance slightly. In Texas, ureaform and similar fertilizers gave better overall appearance and putting quality for golf greens.

With respect to varieties, Dunn's research in Missouri is reviewed, in which Fylking, Sodco and Bonnieblue rated in the "good to excellent" category; Prato, Sydsport, Arista, and Pennstar in the "fair to good" category; and Merion, Nugget and most common types in the "poor to fair" category.

A means for growing sod rapidly on fir sawdust over polyethylene is described. Growth retardants are discussed for South Carolina, Texas and Rhode Island, with some promising results but no clear-cut practical advantages. California investigations indicated that using winter colorants is more economical than overseeding dormant southern turf. Texas research suggested the possibility of nutritional influences on thatch build-up, such as abundant potassium causing lignified growth less quick to decay.

Already familiar chemicals and techniques are reviewed under Weed Control, mostly relating to crabgrass and *Poa annua*.



### PURDUE 1972 TURF CONFERENCE

Proceedings for the annual turf conference held in March at Purdue University have now appeared. As in recent years, the trend is towards presentations involving promotion of golf, executive management, and topics other than turfgrass research. Rieke, Michigan, does provide a general resume of turf fertilization, and others suggest that the breeding of new specialized turf varieties for specific locations still has a long way to go.

Perhaps of particular interest to members is the presentation by E. J. Fuchs, "Artificial Turf -- Care and Usage". Fuchs has responsibility for the St. Louis Stadium now having an Astroturf playing surface. The presentation discussed both pros and cons of artificial turf, based on experience at the stadium with both synthetic and living grass.

Once established, cost of maintenance of artificial turf was only about half that for natural turf, mainly because of reduced manpower needs. Artificial turf also offered more intensive usage even under adverse weather conditions. Some of the disadvantages mentioned were the difficulty in cleaning the Astroturf near dirt areas, the build-up of heat, some fading of color, pile crush where traffic is continuous, difficulty with marker paints, and a tendency to show wear (necessitating future replacement of a costly nature).

### WINTERSEEDING RESEARCH

Schmidt and Shoulders, Virginia, report in the July-August Agronomy Journal on the performance of fine fescue and ryegrass winterseedings into bermudagrass. In general "cultivation" (aerification and topdressing) from one to several times in summer were helpful to an extent for increasing the stand of wintergrass. Volunteer *Poa annua* was also somewhat encouraged. Fescue was superior to ryegrass for providing persistent wintercover that lasted until June, and benefitted quality during spring transition. Generous nitrogen fertilization in winter reduced winter coverage, especially on thatched areas, but benefitted the bermuda. Wintergrass rooting was not as good on thatched areas as where thatch had been removed, and fescue was better able to penetrate the thatch layer (thus avoiding desiccation) than was ryegrass. On the whole this report reflects favorably on fescue golfgreen wintercover as opposed to ryegrass.

### WEED SEED GERMINATION

A study by Holm and Miller, Diamond Shamrock Corporation, reported in the May issue of Weed Science, indicates that for a number of familiar weeds no enhancement of germination results from light with freshly harvested seed, but considerable sensitivity to light occurs after the seed has been buried for some months. The delayed onset of a weed crop following soil cultivation can be partly explained by this finding. The same sort of sensitivity could be aroused by treating the seeds with mannitol. Among the weeds investigated were these that sometimes bother lawn seedings: pigweed, wild oats, switchgrass, velvet leaf, mustard, barnyardgrass, quackgrass, and foxtail.



### TURF RESEARCH, ENGLAND

J. P. Shildrick reports in the May issue of Parks and Sports Grounds on some of the observations being made at the Sports Turf Research Institute at Bingley, England. The usual studies on soil and mechanical apparatus continue, but members may be interested to note what appears to be increasing interest in turfgrass varieties, including some being widely marketed in America. Manhattan ryegrass, for example, is given superior ratings, and Shildrick laments that it is not at present admitted for marketing in England.

Speaking of bluegrasses, Shildrick writes: "Two of these dense, rather broad-leaved varieties -- particularly suited for hard wear in football fields and the like -- are Baron and Sydsport ---. Another variety which is hard wearing -- and more suitable for blending with fescue and bent than the previous two -- is --- Fylking." Bentgrasses are still favored in mixtures in England, and Shildrick continues: "The finer mixtures consist of fescue and bent, strengthened with /bluegrass/ ---."

### LAWNSEED REPORT

The September issue Consumer Reports (Consumers Union of the United States, Mt. Vernon, New York) carried a presentation of "Lawnseed", for which Dr. Schery was one of the informational sources. We are pleased that it was possible to bring to the attention of Consumer Union editors the names of new lawngrass varieties, as representing modern quality. (e.g. "Among the improved varieties are Adelphi, Baron, Bonnieblue, Fylking, Merion, Nugget, Pennstar and Sodco" --- "Some of the varieties you're apt to encounter: Golfrood, Highlight, Jamestown, Pennlawn, Ruby, Wintergreen" --- "Bentgrass varieties include Astoria, Exeter, Highland and Holfior", -- "New varieties are Compas, Manhattan, NK-200, Pelo and Pennfine").

### NITROGEN FERTILIZATION AND WATER POLLUTION

Ag Chem magazine noted in the August issue, that the University of California has received a grant of 1.2 million dollars from the National Science Foundation, for a study designed to resolve whether nitrogen fertilization is a significant hazard to water quality. There has been much controversy over this subject with environmentalists, with some evidence of soluble nitrogen leaching through the soil on heavily fertilized, cultivated fields. On lawns and pasture there is very little likelihood of significant nitrogen dispersal, either in runoff or leachate, -- a good "talking point" for maintaining a dense grass cover.

### GROWTH RETARDANT QUESTIONABLE

Research in California on the effect of growth retardants, reported in California Turfgrass Culture, volume 21, number 3, showed maleic hydrazide to effectively control bluegrass growth, but also to so increase incidence of rust that sometimes the grass is killed.