# BETTER LAWN - - HARVESTS

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# HIGHLIGHTS OF THE QUARTER

Institute activities - pages 2 - 10

Oregon Seed Growers League 28th Short Course on Roadside Development Canadian Sod Growers American Horticulture Society Program 1969 Agronomy Meetings Presentation for Oregon Seed League Meetings Gov. McCall on Field Burning Coordinated Promotion Discussed National Lawn and Garden Week Meetings Scheduled

Reports - pages 10 - 17

Ohio Turfgrass Conference Michigan Field Day Turfgrass Irrigation Conference Michigan Sod Producers Field Day Potpourri From the Agronomy Meetings

Literature Review - pages 17 - 21

New Turfgrass Guide Government Lawn Seed Release Impressive Bluegrass Adaptability Bluegrass - Bentgrass Response to Disease Distinction Among Bentgrasses Purdue Irrigation System Fertilizer Influence on Bentgrass Grass Variety Response Bluegrass For Fairways Regrowth of Grass Bluegrass - Bermudagrass Response to Light Intensity Bluegrass - Bermuda Food Reserves Genetic Leafspot Fertilizer and Dollarspot Disease Sod From Seed Dormancy in Crabgrass Seeds

(Continued on page 2)

#### HIGHLIGHTS OF THE QUARTER (Continued)

Promotional Efforts - pages 21 - 27

In Green Thumb Column In Avant Gardener Washington Invitation Reprints to Wisconsin Lawn Booklet Prepared In the American Rose Magazine Cover Picture Seed World Story Magazine Editor Visits Home Garden Article Horticulture Item Brittanica Encyclopedia Bentgrass Story Kentucky Bluegrass Portrait Landscape Article Seed World Selects Story Fine Fescue Item Completed Seed Blend Story Prepared Hercules Representative Seed World Publicity Article in The Bull Sheet 1970 "Beautification Supplement" Another Bulletin Board Story Press Kit Survey

"What They Are Saying:" - page 27

# OREGON SEED GROWERS LEAGUE

With Institute sponsorship so centered in the Pacific Northwest, president Carnes and other officers were deeply involved in the 29th Annual Convention of the Oregon Seed League Growers. In addition to discussing foreign seed markets as part of a panel, president Carnes appeared before several commissions and other meetings at Seed League time. Dr. Schery appeared on a general program Tuesday afternoon, speaking on Lawns and Turfs in the U.S. and Europe, and Monday evening on Promotion of Fescue Turf for the annual meeting of the Northwest Chewings and Creeping Red Fescue Growers Association.

Interest centers much on the field burning problem, facing restriction in Oregon as one facet of air pollution. Presentations at the Seed League Meetings make clear that progress is being made, and that greater understanding is being achieved alike by growers and those who complain of air pollution. Research is being conducted on substitute means for handling field straw, and hopefully long-term in developing economic uses for this fiber. In the meanwhile methods are being pursued and restrictions undertaken to lessen the nuisance from field burning. A publicity program is well under way to acquaint the public with the many contributions agriculture makes to

### OREGON SEED GROWERS LEAGUE (Continued)

beauty and a clean atmosphere, so that its image be not judged by a particular nuisance at a limited time of the year. Exchanges of correspondence between the Institute and Governor Tom McCall indicate official firmness that air contamination must be lessened, but show understanding that achieving the necessary means for control is partly a state responsibility.

Increasing interest also centers upon foreign markets for Oregon seed, and upon the trend towards private (restricted) varieties. Several presentations touched upon the restricted lists of varieties shaping up in Europe, the only ones which will eventually be available for sale there. Public varieties, for which exclusive licensing is not possible, are likely to suffer loss of market in the future.

Among the technical presentations of interest to growers was an evaluation of pesticides by Mr. Every, who noted that 50 percent of those used (and increasingly questioned) are actually "imposed" upon the grower by the food and drug administration in order to meet purity standards. Every visualizes further banning of insecticides besides DDT (especially the chlorinated hydrocarbons), and some herbicides. Costs will rise because pesticides with shorter residual life will be required. For specialized, small-scale use, it is so costly today to obtain federal registration that most chemical companies can afford to shoot only for the large market. Therefore it will become increasingly necessary for Oregon State University to pursue efforts towards registration of those pesticides of particular interest to the grass seed industry in Oregon. There will likely be increasing residue problems, with restricted tolerances on any plant materials fed to livestock.

Dr. Orvid Lee noted that the feeding of residues to livestock is increasing, thus making registration of even herbicides more difficult. He noted also, that with burning being restricted, herbicide performance is often reduced. One of the newer developments that has had partial success already this autumn is banding the seed row with activated charcoal, as protection to the seed against a pre-emergence herbicide applied generally. Such a method utilized with diuron weed control is awaiting registration.

Dr. Rampton reviewed the history of the seed industry in Oregon, finding that its beginnings were obscure, with production antedating 1880. By the 1880's river boats were loading seed at Corvallis. Most of the early grass seed was obtained as cleanout from cereal cropping, but by 1912 ryegrass was being deliberately planted for export from the state. Highland bentgrass harvesting started about 1933, as did the first plantings of Chewings fescue. Merion bluegrass was planted as early as 1940.

Newly elected president of the league is Robert Humphreys, member of the Lawn Institute's Board of Trustees and chairman of the Highland Bentgrass Commission. It is not possible to report upon all presentations and happenings, but those in attendance regarded this as one of the "best ever" Seed League Meetings.

# 28th SHORT COURSE ON ROADSIDE DEVELOPMENT

October 6 - 10, Dr. Schery represented the Institute at the 28th Short Course on Roadside Development, held in Columbus, Ohio, co-sponsored by the Ohio Department of Highways and the Ohio State University Department of Landscape Architecture. This is the national meeting ground for road landscape people. The first three days of the convention are devoted to formal presentations, and the final two days to a tour of some section of Ohio. Every few years the Institute is invited to give a presentation. This year the tour inspected some interesting highway seeding plots on the Marysville bypass, cooperatively planted last year with the O. M. Scotts Company.

The formal presentations opened with a panel including 9 experts from around the country, having to do with "Construction and Development" of the roadside. Gene Bieber, of Mississippi, discussed "Mulches for Turf Areas" as part of this presentation, a subject reviewed from time to time in Harvests. Another half day was devoted to "Conservation and Nature", involving beautification projects and facilities more than actual turfgrass planting. The evening banquet featured a talk on national problems rather than anything specific to the roadside.

Sessions the second day opened with a series of 6 papers having to do with landscaping of the highway, and design of systems for better plant survival. This was followed by an afternoon series that stressed informational services (such as SCS) that would be available to highway landscapers. Perhaps of greatest technical interest was a study on de-icing chemicals and their influence on grass, which included a listing of those species proven most hardy in Iowa (primarily brome and tall fescue).

First stop on the tour was the demonstration mentioned above co-sponsored with Scotts. It was clear that adequate phosphorus and the absence of nitrogen encouraged clover, but that a minimum of phosphorus is needed for any good establishment of grass. It was felt that 3 lbs./M of nitrogen annually at a phosphorus soil level of approximately 1 lb. gave good turf coverage with almost any species or variety. More than 3 lbs. of nitrogen produced unnecessarily excessive leafage.

Thirteen different grasses or mixtures were planted for comparison, including Merion bluegrass, Common Kentucky bluegrass, Windsor Kentucky bluegrass, Pennlawn fine fescue, Highlight fine fescue, Highland bentgrass, Redtop, and several experimentals plus mixtures that involved two or more of the varieties cited. Ostensibly the search was for varieties which would give adequate but low (or minimal) topgrowth that would not aggravate mowing. In the ratings there was not much difference between the best in this respect and the poorest. Both Highlight and Pennlawn fine fescue made excellent coverage on the roadside slopes. Unfortunately, the Highland bentgrass failed to become established, so that its plot was rated chiefly on the growth of weeds and volunteer grass. Redtop did not establish satisfactorily, either. In appearance Common Kentucky bluegrass was just as satisfactory as were the elite varieties. At an adjacent rest stop, were a combination of Highland bentgrass, Kentucky bluegrass, and fine fescue had been seeded, the stand was satisfactory, and even if not dense under the trees at least adequate to protect the soil and keep visitors "out of the mud".

(Continued on next page)

# 28th Short Course on Roadside Development (Continued)

Other stops for inspection included various roadside rests, equipment demonstrations, a drain tile factory, Bowling Green State University, tobacco mulching demonstrations (an excellent stimulation to seedling growth), tree moving demonstrations, and last (but perhaps not least) tour of the new Anheuser-Busch Brewery at Worthington, Ohio

We were gratified to again have the Lawn Institute prominent in this conference and tour. Included in a travel bag handed out to all people taking the tour were 2 Institute reprints, <u>Lawns</u>, reprinted from Horticulture magazine, and <u>Modern Lawn Maintenance</u>, reprinted from Building Maintenance and Modernization. It is good to get such information into the hands of visiting landscape people ordinarily not subject to direct contact. Attending the Short Course this year were registrants from 39 states and 3 foreign countries. Exposure before an audience of this type can only redound to the benefit of the Institute.

### CANADIAN SOD GROWERS

Upon invitation of Maple Leaf Mills, Institute member in Toronto, Dr. Schery addressed the National Association of Sod Growers of Canada at their October 1 meeting in Toronto. Also attending was Gabriel Eros, former Institute member of Brampton, Canada, (Ontario Seeds). Paul Couse, Norman Rothwell and Eric Paterson attended in behalf of the host company, Maple Leaf Mills.

The presentation seemed well received, with a considerable number of questions and discussion following the presentation. Dr. Schery gave some highlights of lawn conditions in the Atlantic community, noting that everywhere Poa annua was a major factor in fine turf care. On the whole the general market for seed and sod should be growing, but sod growers should adopt a broad view to include instruction in the proper use of their product. Dr. Schery noted that of complaints he receives at the Institute, those condemning sod are the most vehement; sod purchasers (paying a higher price than for seed) expect A-1 performance. Even if the trouble is inadequate sodbed preparation, or poor after-care, the sod grower gets blamed.

Seed quality was discussed at some length, and the reprints <u>Lawn</u> <u>Seed and Lawn Weed</u> and <u>Select Seed Wisely</u> were distributed. Dr. Schery noted that present standards for seed sale must be interpreted in the light of what they truly indicate, and not be accorded unusual significance. Sometimes those inexperienced in turf ecology place more stress than need be upon inconsequencials, such as trivial quantities of the easily-eliminated weeds listed in the reprint <u>Lawn Seed and Lawn Weeds</u>. Eventually seed tests may change radically, to include growth and vigor assessments through radioactive amino-acid pickup in the early stages of germination and through electrophoretic tests.

Current turfgrass varieties were discussed, and a guess on trends hazarded. Most experts today suggest a blend of cultivars for best and longest-lasting performance. Stand counts on mixtures planted at the Institute were given for one of the elite turfgrass varieties becoming more widely planted today. Weed control was discussed, and considerable

# CANADIAN SOD GROWERS (Continued)

interest evidenced in Poa annua. In reply to a question from the floor Dr. Schery indicated that he felt Poa annua a less critical problem in Ontario than farther south in the United States where the species has a far greater chance of dying out in summer than in the more northerly areas. If there is Poa annua (or crabgrass) seed in the soil on which sod is grown, it is spurious to be greatly concerned about small amounts in the seed planted; if the cultivated grass is for any reason set back, seed present in the soil will make itself manifest.

#### AMERICAN HORTICULTURE SOCIETY PROGRAM

The Institute is represented on the education committee, of the American Horticultural Society, in the person of Dr. Schery. It was not feasible for Dr. Schery to attend the first committee meeting, in Philadelphia during the Society convention. But minutes of that meeting have now been issued, and members may be interested in the planned program. Turfgrass matters are often an orphan among horticulturists, who concentrate upon ornamentals and garden plants. It is important to keep turfgrass interests before this committee, and its expanding educational efforts.

Areas of concern and efforts approved by the committee include educational promotion in elementary grades, high school courses in horticulture that will carry credit, developing student participation in extra-curricular activities, increasing public awareness and job opportunities in horticulture, and encouraging inclusion of more plant science in teacher training programs. A catalogue of pertinent information is planned, that might particularly afford the Institute opportunities.

#### 1969 AGRONOMY MEETINGS

The 1969 annual meetings of the American Society of Agronomy were held in Detroit, Michigan. Because of competing demands for time it was not possible for Dr. Schery to attend all of the Division C-5 (Turfgrass Management) sessions, but resumes of papers presented are given in Agronomy Abstracts. Members may be interested in a quick review of research reported.

Beard, Michigan, discussed winter protection of creeping bentgrass under a variety of covers. Properly used, many materials prevented winter drying-out and earlier spring green-up. Viscose-rayon fiber was good, and excelsior mat would be among the best except for leaving loose residues on the green when it is removed.

Calhoun, Iowa discussed artificial soil mixtures for putting greens, and Roberts the influence of salt on roadside vegetation (the influence of the salt could not be nullified by the addition of other ions). Oklahoma researchers found several pre-emergence herbicides effective in repressing annual bluegrass if used in late August (not effective later). Cornman, Cornell, after 5 years of testing management variables thought to influence thatching of Merion Kentucky bluegrass, received a "not significant" response from the computer. Purdue researchers reviewed the criteria

#### 1969 Agronomy Meetings (Continued)

by which they judge selection of new cultivars.

Dudeck, while at Nebraska, undertook an elaborate seeding of roadsides and their examination over a 3 year period. A peculiar choice of seeding rate prevailed (120 PLS/sq. ft.), so that small-seeded grasses such as Kentucky bluegrasses were seeded at only about a pound to the acre. Under such circumstances it was not to be expected that Kentucky bluegrass would give a quick or thick cover compared to vigorous pasture grasses and legumes. Nevertheless, Kentucky bluegrass after 3 years had made an excellent cover on north-facing slopes, but was appreciably thinner on south-facing slopes.

A test of mowing height and thinning on a mixed planting of Kentucky bluegrass, fine fescue and bentgrass was conducted at Rutgers University. Over a period of 5 years Kentucky bluegrass showed the best tolerance to intermittent defoliation, red fescue the least; Kentucky bluegrass was most competitive at intermediate cutting heights, but species-balance did not shift quickly under any of the varied mowing procedures.

Gillham, Oklahoma, reported on the use of asphalt emulsion when planting live sprigs to the roadside (it helps preserve the planting when used in January, but not after March). Beltsville researchers discussed phytotoxicity of pre-emergence herbicides to putting green turf, finding chance of injury from most of them on at least certain varieties, bensulide being the exception. Minnesota horticulturalists reviewed treatments of Kentucky bluegrass with a growth regulator (Ethrel), reporting nothing that would have significance outside of the laboratory.

Kardos, Pennsylvania suggested use of sewage waste water for irrigation of turf, properly treated effluent having been found useful in tests at Pennsylvania State University. Let  $\mathcal{G}_{2}$ . California noted the effectiveness of wetting agents in causing water penetration of soils that repel water. Scotts agronomists reported on solution culture of Kentucky bluegrasses, in which Windsor generally responded most favorably to chosen nitrogen levels. Texas turfmen investigated the pigment content of 6 varieties of bermudagrass; although the amount related to the color of the variety, there did not seem to be practical applications. McVey, of Scotts, noted the response of Kentucky bluegrass to the growth retardant azauracil, which provided less mowing and a darker green color.

Texas researchers investigated the lasting effect of various herbicides on establishment of new seedings (such as would be the case with winterseeding). Triazines were completely repressive, bensulide and diphenamid about 50 percent effective. Dacthal did not repress fescue and bluegrass after the prescribed time, but remained about 40 percent effective to bentgrass. Fine fescue exhibited more tolerance of dacthal, bensulide and diphenamid, than did any other grass, an argument for fine fescue inclusion in winterseeding blends. Morgan, California talked on programming turfgrass management. Rutgers turf breeders discussed intraspecific hybridization of Kentucky bluegrass. Belturf (2n = 49) and Annheuser Dwarf (2n = approx. 71) were used as examples, and 75 percent of the hybrids were at least 90 percent apomictic. The practical effects of this planned crossing and selection is demonstrated in the wealth of new cultivars being released by Rutgers.

(Continued on page 8)

## 1969 AGRONOMY MEETINGS (Continued)

Soil waterflow was discussed by Rawlins, California. Response of some Kentucky bluegrass cultivars to high temperature and fertility was investigated by Virginia agronomists (plants with high carbohydrate content best supported growth at high temperatures, probably the reason why cultivars originating in warm regions are more tolerant of warm weather; they also seem to absorb nitrate to a lesser extent). Wood, Vermont, examined the seedling emergence of several grasses under conditions of induced drought (Golfrood fine fescue was outstanding in its tolerance of drought during these early stages, at levels often lethal to other grasses.) Youngner, California, noted faster rate of leaf emergence and tiller initiation with Windsor Kentucky bluegrass than with Newport and Merion, but the rate for Windsor was significantly reduced by clipping although not for Merion and Newport.

#### PRESENTATION FOR OREGON SEED LEAGUE MEETINGS

On December 9 Dr. Schery discussed the assigned topic <u>Lawns and Turfs</u> <u>in the United States and Europe</u> before the general session of the Oregon Seed Growers League. The presentation compared the similarities of interest between most of Europe and the United States, although differences in taste and climate make for an irregular pace of progress. Except for restriction of varietal offerings within the European Economic Community, the fine lawnseed market should enjoy favorable growth. In many parts of Europe there is today a surge of affluence and interest in the status a good lawn provides, perhaps comparable to the interval in the United States following World War II.

Sizeable lawns are not frequent in Europe, and expenditures for their upkeep probably not so great as in the United States. On the other hand, sportsturf is given considerable attention, in places such as Sweden probably more than it receives in the United States. England, because of its benign climate and untypical maintenance practices, exhibits less similarity in turf maintenance with the United States than does Sweden and interior parts of Europe. Among professionals there is increasing interest in fine turf cultivars, though the preference is for light green shades, and highly maintained turf less common than in the United States. It is evident that top varieties in Europe will not necessarily rate as high in the United States, and vice versa.

Gleanings of European turfgrass research were given, including such ratings of varieties as had become available during the International Turfgrass Conference and the tour of research facilities which followed. On the whole the trend is towards elite varieties of Kentucky bluegrass, fine fescue, and bentgrass; probably somewhat away from perennial ryegrass and timothy (although both of these are used in sportsturf). Interest is centering upon fewer species, but many varieties, of which a goodly number are expected to find market in the United States. Among already familiar varieties Highlight, S-59 and Golfrood generally rated well among the fine fescues; Sydsport, Merion and Fylking among the Kentucky bluegrasses; Highland bentgrass continues to perform well, especially in England; Penncross is seldom surpassed among the creeping bentgrasses.

#### GOVERNOR MCCALL ON FIELD BURNING

An exchange of correspondence with Governor Tom McCall of Oregon has perhaps helped clarify the field burning situation in Oregon. A letter from the Institute office mentions the Governor's personal greetings to the first annual meeting of the Institute in Oregon, in which he expressed his dedication to an uncontaminated outdoors. The agricultural leadership of the seed industry, its importance to Oregon, and its generally progressive attitude are noted. The letter recognizes that smoke is objectionable, nonetheless a "natural" contaminant, and not so noxious as are industrial fumes. Hope was expressed that tolerance might be shown until measures for abatement could be developed.

The governor replied, "Protecting and enhancing the livability of Oregon is the major goal of my administration -- ". McCall went on to say that the intensity of smoke occurring in certain parts of the valley in the summer of 1969 could no longer be tolerated. He urged immediate action on the problem, and pledged, "I continue to support <u>/The seed</u>/ industry and its efforts to solve this problem. I personally have requested additional research funds from the State -- given my strongest support to a request for research funds from the Federal Government." He hoped for a means of burning without distressing smoke, or, as an alternative, other use for the field residues.

Dr. Schery thanked the governor for his reply, and pointed out that a panel discussion at the Oregon Seed Growers League Meeting made clear that action was now being taken. No one would disagree with the official position that Oregon citizens deserve clean air, but that in spite of a crash program, research might not solve the field burning problem immediately (although certainly it would be lessened). It was good to note the new note of tolerance being shown; the seed industry is eager to solve the problem, and the non-agricultural interests are backing these efforts expressing intent to consult with the growers on feasible burning regulations. Dr. Schery added, "When there is agreement on an objective, and mutual respect shown opposing opinion, America will not be defeated for lack of technology."

# COORDINATED PROMOTION DISCUSSED

At a breakfast meeting, held during the Oregon Seed League Meetings, organized by president Carnes and attended by leading seed growers representing various grasses (including many officers or board members of the Institute), W. Scott Lamb presented a plan that had been discussed informally beforehand for a Seed Council. It was suggested that perhaps "greater mileage" could be achieved from the promotional dollar by the banding together of Commissions and interested organizations, in a united effort much like that of the Institute. A combined Seed Council would then have the financial heft to speak for Oregon fine turf seed in a bigger, less confusing way. Lamb indicated, for example, that instead of several small, black-white advertisements each stressing a particular type of Oregon seed as being "best", a more impressive advertisement in color could stress what the consumer is really interested in, "renovating tired lawns" or otherwise upgrading and improving his turf with Oregon-grown fine turf seed.

(Continued on page 10)

#### COORDINATED PROMOTION DISCUSSED (Continued)

While no definite action was taken at the meeting, a good deal of enthusiasm and informative discussion was generated, carried back to Commission and other organizational meetings. At the same time hope was expressed that bluegrass producers could perhaps become more fully effective through creation of a Commission, rather than as a loose, volunteer confederation as now exists. All in all this was a stimulating meeting. President Carnes and Scott Lamb are to be complimented on taking this initiative, and advancing a practical suggestion for implementation.

# NATIONAL LAWN AND GARDEN WEEK

The Institute continues to participate on the steering committee for the National Lawn and Garden Week. Flyers concerning the week have already been mailed to members, and plans are underway to participate to the extent possible during the week of March 20 - March 26. A report has been given Harold Lewis, USDA coordinator for the project in Washington, D.C., and appropriate reprints offered for distribution. Institute efforts will continue to tie-in lawn improvement and bolster seeding with this promotional effort now receiving so much attention from various horticultural groups.

#### MEETINGS SCHEDULED

Although time and funds are not available for attending all of the many meetings that are scheduled nationally, the Institute should participate in occasional events "on the firing line" in order to keep in touch with the people who are actually "selling" good lawns to the public. We are pleased that in the near future Dr. Schery will have opportunity to address the Illinois Landscape Contractors Association in Chicago, the Iowa Turfgrass Conference in Cedar Rapids, and the John Deere Dealer-Distributor group in Horicon, Wisconsin. These visits are planned for early months of 1970, and are in addition to the regular activities with sponsors and formal research conferences.

# OHIO TURFGRASS CONFERENCE

The Proceedings of the 1969 Ohio Turfgrass Conference held December 1 - 3 in Cleveland were issued as the conference was held. This conference has become one of the most elaborate in the Midwest, with many outside speakers brought in from all over the country. This year special efforts were also made to get the reports out publicly, with a luncheon given for garden writers, and prepared press releases mailed. The Ohio State University research and extension staff has been increased to many fulltime and part-time employees, compared to a single individual only a few years ago. Apparently there is ample administrative interest from the Ohio Agricultural Research and Development Center, as well as some sponsorship by the Ohio Turfgrass Foundation.

The Proceedings open with a report by Niehaus, Ohio, on grass mixtures. The conclusions are familiar, -- aggressive nurse species interfere with establishment of the permanent grass, and often persist. The effectiveness (Continued on page 11)

### OHIO TURFGRASS CONFERENCE (Continued)

of bluegrass-fine fescue combinations is recognized, but it is noted that even here sometimes the fine fescue prevents establishment of the bluegrass. Funk, New Jersey, follows up with a more scholarly discussion of <u>Blending</u> <u>Bluegrass Varieties</u>. He discusses breeding technicalities, and concludes that eventually there will be sufficient bloodlines having similar growth habits to provide more meaningful combinations for special uses. For the time being he suggests using blends of compatible types.

Miller, Ohio, reports rather fully on the research undertaken to determine why tall fescue did not hold up on the Ohio football stadium (this has been reported on previously). In the original seeding 9 lbs. of tall fescue and only one-quarter pound of a mixture of Kentucky bluegrasses (Delta, Newport and Merion) were seeded per 1,000 sq. ft. Even at this light seeding rate, and with repeated overseeding of tall fescue, the bluegrasses "ran out" the tall fescue. Research was undertaken to determine why. The main cause is attributed to bluegrass aggressiveness under the high levels of fertility used, aided by some winterkill of tall fescue and advantage to bluegrass over fescue at a 2 inch mowing height.

Holmes, Texas, recalled his observations on mixed bentgrass seedings for golf courses when he was active in the Midwest. He points out that about half of the golf courses actually played on bluegrass, although his assigned topic of bentgrasses led him to discuss these only. He felt that the Colonial bentgrasses have become "contaminated" with creeping blood, so is often recommending creeping types such as Seaside and Penncross in addition to "the old standard Fairway and Tee blend" (1/3 Seaside, 1/3 Astoria, 1/3 Highland). He suggests Penncross be included if the price is not of consequence, but generally seems to favor Seaside. If finances are a controlling factor he recommends 80 percent Highland, 10 percent Astoria and 10 percent Seaside in an original seeding, with later bolstering by Seaside. He does recognize the advantages of Penncross for greens.

Hodges, Iowa, discussed turfgrass disease symptoms, and provided a handy table for identification. Muse, Ohio, discussed the application of fungicides. Jackson, Rhode Island, discussed how fungicides are evaluated. Moser, Ohio, reviewed the influence of management on turfgrass disease. Most of Moser's conclusions are well covered in the literature, but a couple of tables of Ohio data were given. One table related loss of bluegrass varieties to Helminthosporium under two levels of fertility (the disease was always more severe under higher fertility), and the spread between varieties ranged from almost no loss with Pennstar and Merion to almost complete loss with Cougar. Common, Delta, Prato and Windsor were intermediate. High mowing reduced incidence of leafspot, as did reel mowing over rotary to a slight extent.

Latham, Wisconsin, discussed soil temperature and its ramifying effect upon grass growth. Henderlong, Ohio, related temperature to germination and growth. He states that the optimum temperature range for germination is  $65^{\circ}$  F. to  $85^{\circ}$  F. for most cool-season turfgrasses, but that within this range the ryegrasses, the creeping bentgrasses and redtop germinate best at cooler levels, the bluegrasses, fescues and Colonial bentgrasses at higher levels. Root growth is best at a soil temperature 10 to 15 degrees below the air temperature that is best for foliage growth. Soil temperature above about  $85^{\circ}$  stops root growth for most cool-season grasses.

(Continued on page 12)

# OHIO TURFGRASS CONFERENCE (Continued)

Blaser, Virginia, related soil and air temperatures to the fertilizing of turf. He noted that potassium availability is cyclic, with relative abundance in winter due to freezing action on clay and low absorption then, but rapid consumption in spring and relative deficiency in late summer (at which time it is well to apply potassium liberally in fertilizer). He is afraid of "too much" nitrogen, for the reasons usually given (especially hot weather disease). He suggests frequent, light applications of soluble nitrogen as the best way to control the situation. He is an advocate of autumn feeding.

Partyka, Ohio, related the familiar turf diseases to temperature required for their growth. Many have a broad range, and others quite a limited range. Stroub, Ohio, reviewed weed control and concluded that with phenoxys and dicamba now available, broadleaf weeds should no longer be much of a problem. Record, Illinois, spoke specifically about dicamba and MCPP as used on golf courses. Miller, Ohio, brought up the subject frequently mentioned these days of crop in grass seed being a troublesome "weed", especially bentgrass, tall fescue and Poa annua. He suggested combinations of herbicides where there are several types of weeds. Finally, Buscher, Ohio, reviewed the principles behind the pruning of ornamental plants.

# MICHIGAN FIELD DAY

Although it was not possible for the Institute to be represented at the Michigan State University Turfgrass Field Day, members may be interested in the report issued concerning the program. Considerable data and ratings by the Michigan specialists are involved.

Reviewing the season, 1969 was a year of considerable winter damage, especially due to desiccation of bentgrass and Poa annua of golf greens, and freezing injury to bluegrass sod under sloppy conditions. Spring was late and cold, recovery slow. Under these conditions soluble nitrogen provided best response among fertilizer materials. Leafspot and Fusarium were abundant.

At stop 1, 20 bentgrass varieties, both vegetative and from seed, were compared. Toronto, Penncross and Cohansey continue to rank best in overall performance. In the ratings several MSU coded selections and one introduction from Europe exhibited excellent "visual quality ratings".

At stop 2, the rooting of sod grown on mineral soil was compared with that grown on organic soil. According to this test there was not appreciable difference.

At stop 3, there were demonstrations of the effectiveness of systemic fungicides in preventing dollarspot on creeping bentgrass. At stop 4, winter covers to prevent desiccation were exhibited and compared.

Stop 5, provided evaluation of fine fescue varieties. Forty-five varieties have been tested, but none has shown strong resistance to leafspot. Pennlawn, Jamestown and Wintergreen were reported good, but the rating sheets presented listed only rate of establishment and not visual appearance.

12

(Continued on page 13)

# MICHIGAN FIELD DAY (Continued)

Stop 6, was a similar evaluation of bluegrass varieties, involving 66 entries. Among the conclusions, "Ratings in 1969 indicate that Merion, Fylking and Pennstar have excellent general appearance throughout the season." Incidentally, the Michigan experts recommend a blend of 2 to 4 bluegrass varieties in preference to a single cultivar.

Stop 7, involved evaluation of tall fescues and ryegrasses. The former are not recommended for Michigan, and the latter only for temporary use. Manhattan was the only ryegrass mentioned as distinctive, "Had excellent color and appearance through the first season".

Stop 8, dealt with weed control; stop 9, with thatch invasions; and stop 10, with cumulative toxicity from pre-emergence herbicides. It was reported that fine fescue is damaged from yearly application of bandane, benefin and DCPA; bluegrass was seriously injured from yearly applications of bensulide and terbutol; Merion was injured by bandane and bensulide.

Stop 11, evaluated nitrogen fertility for Merion bluegrass, gauged by incidence of dandelions. Heavy fertilization provided good appearance and fewest dandelions, with ammonium nitrate generally better than organic sources and more efficient than ureaform. Similar studies were carried out at stop 12, on Common, Delta and Windsor bluegrasses. All grasses had similar quality ratings at moderate fertility rates, but Windsor rated better under high fertility (8 lbs. N/M). In a test of Merion bluegrass from sod as compared to seeding, there was no appreciable difference at moderate to heavy fertilization rates, but sodded turf was superior when unfertilized. Tests with fine fescue (Pennlawn, Wintergreen) showed better quality at higher fertility rates (range up to 6 lbs. N/M), and better recovery from injury.

Stop 13, was concerned with eliminating bentgrass from Kentucky bluegrass chemically; no conclusions are advanced. Stop 14, involved investigation of soil mixtures for putting greens. Strangely, visual ratings for bentgrass quality were best where a fine sandy loam was used without any sand or peat additives, even though this had the lowest infiltration rate of any of the soil blends. In general the ratings indicate that a high percentage of soil was beneficial, that peat conferred benefits when sand content was high, but that coarse sand additions were generally deleterious.

Stops 15 and 16, dealt with autumn lawn care, and involved conventional recommendations. Personnel active in the Michigan State research program now numbers 18 people.

# TURFGRASS IRRIGATION CONFERENCE

The Seventh Annual Turfgrass Sprinkler-Irrigation Conference was held in California during the summer, and the Proceedings recently distributed. Much of the 65 page report has to do with engineering and soil specifications, but there are occasional references to turfgrass performance.

An elaborate study is being sponsored under the auspices of the University of California, Davis, on the compaction of golf greens and (Continued on page 14)

# TURFGRASS IRRIGATION CONFERENCE (Continued)

their water transmission. A well-documented preliminary report heads the papers in the Proceedings.

There follow discussions on water storage (lakes, etc.), water purification, sprinkler testing facilities and so on. W. B. Davis, University of California, reports an extensive survey of golf greens in California (nearly half have been constructed since 1955). Fourteen conclusions are advanced as a result of this study, which suggests a hit-or-miss approach to greens watering generally rather than thought-out plans.

A report of interest is <u>Turfgrass Varieties and Irrigation Practices</u>, by Dr. Youngner, Institute advisor in California. Youngner discusses factors such as depth of rooting which influence drought tolerance of different cultivars. In his opinion the most drought-tolerant turfgrasses for southern California are the bermudagrasses; zoysia, too, is drought tolerant, but does not generally root as deeply as bermuda. Tall fescue is the most drought tolerant of the cool-season grasses. Youngner states, "Red fescues are moderately drought-tolerant, but do not have as deep a root system ---". Kentucky bluegrasses must be mowed high to develop a sufficiently deep root system for drought tolerance. In general bentgrasses and <u>Poa annua</u> have so shallow a root system that they are not very drought tolerant, but "Highland bentgrass is the most drought and heat tolerant of the strains and species."

Marsh reports on a study winding up at the University of California, where automatic watering (according to water tension in the soil) was compared with the conventional system. The automatic system set for activation at moderate moisture stress saved water without sacrifice in turf quality. Sprinkling needs, as judged by an attendant, frequently were overestimated or underestimated. Bermuda required more water than did st. augustine.

### MICHIGAN SOD PRODUCERS FIELD DAY

On September 10 a field day was held at the Michigan State University Muck Experimental Farm, relating to sod production.

At stop 1 the effect of height and frequency of mowing was investigated. Best sod strength was achieved from high mowing, with frequency of mowing relatively unimportant. It is suggested that sod mowed fairly tall enjoys a more favorable physiological condition, and thus should possess greater rooting capability.

At stop 2, 22 bluegrass varieties and 3 fine fescue varieties were evaluated for sod. Rating best (sod strength the criterion) were, in order, (coded selections ignored), Nugget, Pennstar, Fylking, Belturf, Merion, Jamestown fine fescue, Cougar, Pennlawn fine fescue, Campus, Windsor, Arboretum, Prato, Delta, Kenblue, Park, Newport, South Dakota Common. Sod strength varied seasonally.

Rating bluegrass varieties for rate of establishment, Park and Delta headed the list (of course fine fescues were even more rapid); in visual density <u>/</u>after Pennlawn and Jamestown fine fescues/, Kenblue, Delta, (Continued on page 15) Fylking, Windsor and Arboretum came in that order; for autumn color Belturf lead the list, followed by Merion, Nugget, Pennstar, Captan, Campus, Fylking and Cougar.

Blends of bluegrass varieties are recommended by Michigan, and 6 of them were utilized in a study at stop 3, planted in mixtures. No great difference was noted, but it was concluded, "blends containing Fylking tended to rank higher in terms of sod strength." Varieties included in the blends were Fylking, Merion, Newport, Park, Prato, and Windsor, in 11 different combinations.

Fine fescue in combination with Merion bluegrass was object of another study; as little as 30 percent Merion with 70 percent Pennlawn was sufficient for adequate sod strength.

Stop 4 was concerned with nitrogen fertilization for sod. Higher rates produced attractive foliage, but reduced root and rhizome weights on muck soil. An average of 15 lbs. N/A per month seemed sufficient. Recommendations are for 90 to 150 lbs. N/A annually for Merion, 60 - 100 for Common Kentucky bluegrass, and 40 - 75 for fine fescue.

Stop 5 was a study of soil subsidence. Soil loss has been 5.2 inches for five sod crops (2.4 inches under permanent grass), indicating loss of about  $\frac{1}{2}$  inch soil with each sod crop. Stop 6 related to studies on Fusarium blight of Merion Kentucky bluegrass.

Stop 7 involved investigations of clippings from sod. Pellets made from the sod clippings have excellent nutritive quality, and are being investigated in several animal feeding studies. Stop 8 related to investigations on the heating of sod after harvest. Fairly close mowing prior to lifting and transport is one means of reducing metabolic activity and heating during transport; a 3/4 inch height is suggested. Withholding nitrogen fertilizer immediately before harvest also reduced injury. Irrigation seemed to have little effect one way or another.

#### POTPOURRI FROM THE AGRONOMY MEETINGS

Reports contained in the Agronomy Abstracts, from divisions other than Turfgrass Management, relate to matters that may be of interest to members. A few of the pertinent presentations are mentioned below.

Haploid (as well as hexaploid) plants of alfalfa have been created by special breeding procedures, enlarging the tools for breeding progress. If alfalfa, why not turfgrasses?

Harlan and Rawal have undertaken a thorough review of the bermudagrass genus. They recognize six varieties of the common species  $\underline{C}$ . <u>dactylon</u>, and seven additional species in addition to  $\underline{C}$ . <u>dactylon</u>; as many are tetraploid as are diploid.

Kneebone, Arizona, investigating efficiency of water use by bermudagrass clones, found the range roughly fourfold. Certain characteristics (viz. leaf thickness, total leaf area, stomate density, etc.) correlated with this efficiency.

(Continued on page 16)

# POTPOURRI FROM THE AGRONOMY MEETINGS (Continued)

Kentucky researchers compared Kentucky bluegrass with tall fescue under different planting schemes. Rye used as a nursegrass with either species severely reduced seedling size and stands. Bluegrass benefited more from autumn sowing than did tall fescue.

Bluegrass pasture was investigated in Virginia. Bluegrass could support a fairly heavy stocking rate, although individual animal gains lessened as stock increased. As would be expected, spring and autumn animal gains were greater than in summer.

Elling, Minnesota, studied the effect of burning seed fields of both Kentucky bluegrass and timothy. Apparently the response is not so great in Minnesota as in the Pacific Northwest, although modest seed yield gain usually resulted from a burning immediately after harvest (but spring or autumn burning frequently ruined the crop).

USDA researchers planted clones of apomictic Kentucky bluegrass in a wide variety of habitat going as far south as Alabama. There was a significant decrease in apomixis on seed produced in Alabama as compared to elsewhere, but this is believed attributable chiefly to one clone of Turkish origin.

Bryant, Virginia, compared the palatability of several grasses to grazing animals. This was measured by a difference in herbage yields taken before and after grazing. Timothy showed greatest consumption, followed by orchardgrass, bermudagrass, Kentucky bluegrass, reed canary grass, and tall fescue. All grasses showed higher protein content when well fertilized

It is apparent that smaller animals than livestock are being used to test for nutritional quality of forage, especially voles. In a study at Western Michigan University trapped <u>Microtus</u> showed a "digestion coefficient" of about 43 percent on redtop, a slightly greater figure of 47 percent when fed Kentucky bluegrass.

Several papers in the Soil Chemistry Division dealt with volatilization of pesticides, a matter of especial concern under present awareness of pollution. It is evident that many of the familiar insecticides, including the comparatively resistant DDT, do volatilize to a greater or lesser extent, -- a matter that should be considered both when offering products to the homeowner or for agricultural use.

A study in Canada uncovered the interesting fact that phosphorus uptake in the presence of ammonia was nearly twice that where ammonia was absent. Much of the increased phosphorus concentrated near the root surface without being absorbed into the root, and could be washed free.

A case of repeated fungicide application in Porto Rico caused essential micro-organisms, especially those concerned with mineralization of nitrogen to be eliminated, effecting "sterilization" (nitrogen starvation) of the soil which remained unproductive without nitrogen additions.

An interesting suggestion was advanced by Power, USDA, North Dakota, for developing a "pool of nitrogen" for semi-arid grasslands. He hypothesized that a generous nitrogen fertilization (to the point of "saturation" of (Continued on page 17)

# POTPOURRI FROM THE AGRONOMY MEETINGS (Continued)

usable nitrogen) might be perennially recycled to the benefit of yields. Tests indicate that about 350 lbs. of nitrogen per acre can be trapped in a grassland soil over a 4 year period, nearly 200 the first year; excesses above this remain in the soil, and under limited rainfall are not lost. The nitrogen was trapped chiefly in grass tops, roots, and detritus. Cattle grazing on grassland so treated increased their gain from about 55 to 145 lbs. per acre. Would this same principle apply to a generously fertilized lawn in northerly climates?

An investigation of the soils around old Mayan ruins in Guatemala "suggests that period greater than 1,000 years after abandonment may be required for restoration of original content of organic matter and soil fertility." These were the findings of researchers from Cornell University and the University of Pennsylvania, and point-up how long-lasting the effects of soil deterioration can be.

In a study at Southern Illinois University, crown vetch establishment was superior when tall fescue was used as a companion species than when ryegrass was used; "annual ryegrass appeared to adversely effect crown vetch seedling growth." This ties in with other reports of possible toxic secretions from ryegrass.

The usefulness of earthworms is pointed up by a study by Vimmerstedt, Ohio, on reclamation of stripmine spoil banks. The worms effectively utilized litter from black locust trees planted on the banks, burying the organic material and depositing their castings on the surface, to the benefit of the soil. The earthworm population survived and reproduced in these locations for the 2 years of the study. They buried or consumed about 2 tons of litter per acre. Samplings cultured in the greenhouse showed consumption or burial of nearly 30 tons per acre of humus.

### NEW TURFGRASS GUIDE

Publication 311 of Virginia Polytechnic Institute, <u>Turfgrass Guide</u> for Lawns and Other Turf Areas, has appeared with a July, 1969 date (although not distributed until the end of November). This is a revision of an earlier guide, with considerable change in discussion of climatic limitations, grass varieties and mixtures, fertilization schedules and other maintenance factors. It is authored by several professors in extension, agronomy and ornamental horticulture.

The diversity of climate is first discussed, and suggested seed blends offered for sunny lawns, shaded lawns, mixed lawns and utility lawns, both in the western and mountainous areas (where northern grasses are used), and in eastern Virginia (where southern grasses are used). Even in the latter section northern seeded grasses are suggested for lawns of open sunlight and shade. The authors seem to prefer some Kentucky bluegrass mixed with tall fescue for athletic fields, playgrounds, parks and utility lawns.

Establishment and maintenance are next discussed, with special emphasis upon fertilization. Virginia definitely leans towards generous fertilization in autumn, little or no feeding in spring (with the coolseason grasses). Fertilization is recommended for bermuda and zoysia (Continued on page 18)

#### NEW TURFGRASS GUIDE (Continued)

throughout the year. High mowing is suggested for bluegrass and fescue, low mowing for bermuda and zoysia.

# GOVERNMENT LAWN SEED RELEASE

A pamphlet, bulletin no. 169, "How to Buy Lawn Seed", has been published and publicized by the U. S. Department of Agriculture Consumer and Marketing Service. On the whole the leaflet is well cast. It opens by discussing the objectives of a lawn, then names individually the grasses that are conventionally used. Label information is reviewed, and the Federal Seed Act briefly discussed. A nice headline appears on the final panel, viz. "'Bargain' seed may be expensive." Less edifying is the sample seed mixture outlined, in which 24 percent of the blend is of coarsekind grasses (annual ryegrass and Kentucky 31 tall fescue). The insistance on discussing pure live seed also belabors the presentation a bit.

# IMPRESSIVE BLUEGRASS ADAPTABILITY

If documentation be needed affirming the ability of Kentucky bluegrass to persist, one might turn to a report by Zedler and Zedler in Ecology, 50: 432. The research dealt with recolonization of old fields that had been abandoned. Many native species recolonized portions of the habitat where specific sites suited them, but Kentucky bluegrass almost alone was "present on all topographic positions". Once again Kentucky bluegrass is proved widely adapted for the varying conditions that might be found in different parts of a lawn or athletic field. The authors conclude that even though bluegrass may decline in relative importance as stands of natural vegetation evolve, "in view of its present broad range of tolerance it is unlikely that it will ever be eliminated."

#### BLUEGRASS - BENTGRASS RESPONSE TO DISEASE

Pennsylvania State University researchers report in the Sept. Oct. <u>Crop Science</u> upon response of several races of dollarspot disease inoculated to 37 bluegrass varieties and 18 creeping bentgrasses. Races that were most serious on bentgrasses were usually least serious on bluegrasses. And so far as varieties within a species are concerned there was inconsistency, a virulent strain on one variety often being the least virulent on another. It is concluded that there is a wide range of response both by the disease and within the turfgrasses, as to whether the affliction will be severe or not. Averaging all responses, Park and Campus bluegrasses were among the least afflicted, Merion, Newport and Pennstar the most. Among seeded bentgrasses Penncross was significantly superior to Seaside.

# DISTINCTION AMONG BENTGRASSES

A report from Cornell University appearing in the Sept. Oct. <u>Crop</u> <u>Science</u> characterizes the growth of redtop, velvet bentgrass, creeping bentgrass and Colonial bentgrass grown in culture solutions. Within 5 weeks species differences were quite obvious. The upright habit of (Continued on page 19)

### DISTINCTION AMONG BENTGRASSES (Continued)

Colonial bentgrass, as compared to the decumbent habit of velvet and creeping bentgrasses, is confirmed. Little difference could be distinguished between Penncross and Seaside creeping bentgrasses, but there were both dissimilarities and similarities between Exeter and Highland Colonial bentgrass. Although the authors feel their observations make it easy to classify varieties, they reach no conclusion as to whether Highland and Exeter should be the same species or not.

# PURDUE IRRIGATION SYSTEM

Dr. Daniel has given the name "Purr-Wick" to the scheme of irrigating rootzones, applicable to intensively managed turf such as golf greens. Basically the scheme is to lay plastic on a thoroughly compacted, level soilbed, and build a sand (or other aggregate) medium above for the grass to grow in. Water level is regulated as it would be in a basin, through a drainage valve that can be set for any level; it may be automatically controlled with a float valve. This scheme is a result of research carried on by a series of graduate students beginning about a decade ago. The new write-up is the first time the information has been "pulled together" in the form of general specifications. Dr. Daniel, Institute advisor, sent copies of his preliminary 10-page exposition to the Institute for its information, asking for corrections and criticism. Apparently the final draft will be released towards the end of the year.

# FERTILIZER INFLUENCE ON BENTGRASS

Markland and Roberts report upon studies conducted in Iowa on the feeding of creeping bentgrass, in the September-October Agronomy Journal. Soluble nitrogen sources and sewage sludge produced similar response, but tankage and ureaform were less effective in promoting growth than other fertilizers. The studies were conducted over a 5 year period.

#### GRASS VARIETY RESPONSE

Arizona researchers report in the Sept. Oct. <u>Crop Science</u> on the treatment of bermudagrass strains with three different herbicides generally lethal to the grass. There was great difference in response by differing strains of the grass, but no strains were immune to all three herbicides. Generally this would probably hold with northern grasses as well.

### BLUEGRASS FOR FAIRWAYS

Dr. W. H. Daniel, in the November "Bull Sheet" (Midwest Association of Golf Course Superintendents) recommends as one item for attention in turf management, overseeding following vertical scarification. He is quoted as saying, "The newer machines permit the use of light rates of the new varieties of grasses -- at 10 lbs. of seed per acre the price of bluegrass is not critical". Dr. Daniel recommends the use of premium varieties more carefully planted, rather than tonnage of inexpensive grass.

# REGROWTH OF GRASS

A study by Wisconsin researchers reported in the Sept.-Oct. <u>Crop</u> <u>Science</u> showed nitrogen decrease and carbohydrate increase from younger stages towards maturity with bromegrass. Tillering decreased until heading, as did the number of axillary buds. When the grass was cut the density of regrowth was more associated with the number of buds and the nitrogen content, rather than with carbohydrates, number of tillers, or weight of the plant parts. Probably these same correlations hold true with defoliated turfgrasses.

# BLUEGRASS - BERMUDAGRASS RESPONSE TO LIGHT INTENSITY.

McVey and Mayer report in the September-October Agronomy Journal on response of Kentucky bluegrass and bermudagrass when grown under plastic panels of differing color. Blue light was more effective in eliciting grass response than was gray. The authors conclude, "The minimum light quantity for acceptable turf --- of Tifgreen bermudagrass and Windsor Kentucky bluegrass should exceed 40 to 50 percent transmittance of full sunlight -- in blue, -- or 60 to 70 percent --- in gray --- ".

### BLUEGRASS - BERMUDA FOOD RESERVES

A study by California researchers (including Vic Youngner, Institute advisor), reported in the Sept.-Oct. <u>Crop Science</u>, deals with carbohydrate accumulation in bermudagrass and Kentucky bluegrass (Newport). Carbohydrate concentration was greatest at the coolest temperature for both species. Carbohydrate accumulation increased with time, and both species were approximately equal for sugar content at comparable temperature.

# GENETIC LEAFSPOT

A report by USDA researchers in the <u>Journal of Heredity</u> (May-June, 1969) discusses a leafspot disease in sorghum for which there is no casual fungus, the symptoms dependent upon a single gene. One wonders if leafspot disease of turfgrass, difficult to control with fungicide, could sometimes have a direct genetic basis?

# FERTILIZER AND DOLLARSPOT DISEASE

Markland et al report in the September-October Agronomy Journal on the well known influence of depression of dollarspot disease on creeping bentgrass by nitrogen. No matter the source of nitrogen, the greater its availability the more was dollarspot reduced on creeping bentgrass. Milorganite provided an added fillip of control, but it was not possible to isolate any measurable substance from the Milorganite that could explain this extra measure of dollarspot inhibition.

# SOD FROM SEED

As part of the Agronomy Society Meeting tour Dr. Schery had opportunity to visit a major sod operation near Lansing, Michigan; and the November Weeds, Trees and Turf reports on Michigan State's first sod field day. Operations on muck soil are somewhat different than on mineral soil; in mid-November fast-growing sod on muck was still being lifted and shipped as far as Pittsburgh at the rate of about 4,000 sq. yds. per day.

There is generally some regrowth from rhizomes that escape sod lifting, but the sod growers nonetheless overseed the area to assure a good stand. The owner, Halmich, explained that even though a seeding this late may fail, a stand does develop often enough to risk the expenditure. The difference can mean absence of crop for one year. He also explained that they had "been through the mill" on light seeding rates, and was convinced that heavy seeding (about 80 lbs. per acre with elite bluegrasses) was best. His last purchase (of \$6,000 worth of seed) was being applied immediately after sod lifting no matter the season. Sod-lifting continues until the ground is frozen.

Some of the highlights reported by Weeds, Trees and Turf: -- Sod strength is mainly due to the bluegrass, not the fine fescue component in mixed plantings, but as little as 10 percent bluegrass usually provides a sod that holds together acceptably. Nugget, Pennstar, Fylking and Merion were the varieties with greatest sod strength, in that order. Blends of varieties are recommended for greater disease resistance and adaptability. Blends containing Fylking ranked slightly higher than others in sod strength.

On organic soils, it is recommended that bluegrass not receive more than 30 lbs. of nitrogen per acre in the summer, and no more than 60 lbs. at any other time of year. Dr. Rieke recommends about 100 lbs. annually for Merion, slightly less for natural Kentucky bluegrass. Fusarium blight is becoming widespread in Michigan, with no chemical cure yet available; it is a hot-weather problem. Sod is now clipped fairly low prior to lifting, in order to reduce respiration and heat build-up during transportation. A square yard of organic sod weighs 33 lbs., of which two-thirds is water and one-fifth soil (the remaining tenth mostly roots and rhizomes).

#### DORMANCY IN CRABGRASS SEEDS

Factors controlling dormancy in two African crabgrass species were studied in Florida, and reported in the Sept.-Oct. <u>Crop Science</u>. The seed typically after-ripens for 4 or 5 months; thereafter the palea and lemma influence additional "dormancy" (their removal stimulates germination). If the seed coats are removed the after-ripening period can be shortened (a similar effect can be obtained by treating dehulled seeds with gibberellin).

#### REPRINTS TO WISCONSIN

Upon request from Dr. Raymond G. Duewer, Wisconsin State University, a large selection of reprints was sent for classroom use there.

# IN GREEN THUMB COLUMN

We are pleased to report additional direct quotation of the Lawn Institute, in George Abraham's <u>The Green Thumb</u> syndicated column appearing in newspapers nationally. In early October George utilized Institute information concerning "Crabgrass Lawns" as opposed to those of perennial grasses. Abraham cites the disadvantage of annual grasses for the lawn. He repeats, "If you're going to sow seed annually, why not bluegrass instead --" and "I'd include some perennial fine fescue and bluegrass with ryegrass just for insurance -- " "Dr. Robert Schery, Director of the Lawn Institute, states 'The idea looks good -----' ".

# IN AVANT GARDENER

The Institute is quoted on "Southern Lawn Strategy" in the September issue of the Avant Gardener, published by the Horticultural Data Processors, of New York. The item reads, in part: "Biggest trend in southern lawns: winterseeding with northern cool-season grasses to give a beautiful-allwinter turf. This is analogous to 'bolster' seeding in the North, except that the wintergrass is grown as an annual.

"Ryegrass -- does not fade away gracefully as the southern grass revives in spring. Much better, says Dr. Robert W. Schery of the Lawn Institute -- is a fine-textured blend containing fine fescues, the quickest to make an acceptable lawn; Kentucky bluegrass, to provide mid-winter beauty; and Highland bentgrass, which is at its best late in the season.

"Timing is very important --- f-- instructions for winterseeding are then given/ --."

### WASHINGTON INVITATION

Upon invitation of the American Association of Nurserymen, under the honorary chairmanship of Mrs. Richard Nixon, Dr. Schery and the Institute were requested to attend a luncheon in Washington, D.C. devoted to the 17th Landscape Awards on the 15th of October. Because of the distance and conflicting travel Dr. Schery declined, but felt honored to have the Institute included on the guest list for this important occasion.

# LAWN BOOKLET PREPARED

A supplementary means for publicizing fine turfgrasses, is to have them mentioned in literature widely distributed by sources other than the Institute. Dr. Schery prepared the text for an authoritative lawn booklet to be distributed by a prominent irrigation apparatus firm, the assignment handled through Ogilvy and Mather, of Toronto. The information provided should further effective usage of fine-textured grasses in all parts of the country.

# IN THE AMERICAN ROSE MAGAZINE

The Institute story, <u>Winter Hardy Lawns</u>, appeared in the October issue of the American Rose, with author credit and Institute by-line. The story opens, "Homeowners aware of the tenderness of roses -- sometimes worry about the traditional fine lawngrasses such as the Kentucky (Continued on page 23)

# IN THE AMERICAN ROSE MAGAZINE (Continued)

bluegrasses, fine fescues and bentgrasses --. Don't sell your bluegrass - fescue lawns short, even in bleak, open areas -- ". And also, from the press kit, mention of the Lawn Institute Seal of Approval was included as something of a guarantee on packaged seed.

#### SEED WORLD STORY

The Institute item, <u>Insure Lawn Planting With Fertilizer</u>, appeared as the "Bulletin Board Suggestion" in the October 10 issue of Seed World. The opening sentence emphasized the interplay between fine turfgrasses and their fertilization, viz. "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 -- builds up a bluegrass-red fescue turf without materially increasing mowing --- thickens and builds up a bluegrass - red fescue turf without materially increasing mowing problems".

# MAGAZINE EDITOR VISITS

We were pleased to have Gene Ingalsbe, editor for Weeds, Trees and Turf magazine, call at the Institute for a visit and **disc**ussion of future stories planned for this industry publication. In the past the magazine has carried many informational items of advantage to the Institute program. We were most pleased to be able to entertain Mr. Ingalsbe, and show him over the Institute demonstration grounds.

#### HOME GARDEN ARTICLES

A two-part story was prepared for Home Garden magazine, for appearance in March and April issues, tentatively entitled "In Step With the Season" and "Spring Follow-Up". The former reviews the lawn situation across the nation, and advocates early season efforts to get the lawn off to a fast start, not the least of which is seeding and overseeding. "By-and-large the fine fescues (represented by varieties such as Chewings, Illahee, Highlight, Pennlawn, etc.) assume the place of centipede and bahia in the South, requiring only modest maintenance. Fine fescues are much used for dry sites, sandy soils, and in the shade under trees. -- "

The second segment stresses crabgrass prevention, fertilization, and thatch removal. "There is still time for renovating and reseeding new lawns. Experts suggest mixtures of seed provide more widely adaptable

turf. High quality blends are entirely 'fine-textured' -- ". Mowing is discussed, "If possible mow Colonial bentgrasses such as Highland twice a week, at a height of about 3/4 inch. The low-growing bluegrasses such as Fylking and Pennstar can be kept at around an inch, but the traditional bluegrasses such as Kenblue and Park /higher/ ---".

# COVER PICTURE

An Institute photo appeared on the cover of the October 10 issue of Seed World.

### HORTICULTURE ITEM

The Institute prepared "Spring Handbook on Lawns", for Horticulture magazine, well-known publication of the Massachusetts Horticultural Society. The story discussed lawn needs nationwide, and mentioned that the Northeast was "given over to the Kentucky bluegrasses (most lawns), the fine fescues (shade, droughty-infertile soils), and the bentgrasses (especially turfs in moist climates of the Great Lakes)." Maintenance practices are discussed, and bolster seeding emphasized. "If the lawn is thin, overseed lightly, preferably after scarification. Here is a chance to upgrade the turf with the newer varieties such as Fylking and Pennstar, Pennlawn or Highlight, etc. Bluegrass and fine fescue /do well/ on heavier soils -- " Fine turf and the care necessary for it are taken up for each of the five climatic sections of the nation.

# BENTGRASS STORY

A story concerning the use of Penncross bentgrass for golf greens was perpared for the Golf Superintendent in late November, for publication sometime early in 1970. Close-up photos were taken from samples of Penncross sod maintained on the Institute grounds. As sent to editor Tom O-Hara, the story was tentatively entitled "Penncross, Pick of the Pros".

# KENTUCKY BLUEGRASS PORTRAIT

During November a revision of the original "Portraits I", was completed. This was originally done for Weeds, Trees and Turf magazine some years ago. The story is expected to appear in an early 1970 issue featuring turfgrass, and will include photos taken from plantings on the Institute grounds. The story emphasizes the increasing interest in and importance of Kentucky bluegrass, and the trend to modern varietal identification. History of the species, its general habits and needs are covered first, followed by a listing of varieties (that helps show the breadth of interest in Kentucky bluegrass today).

# LANDS CAPE ARTICLE

The Institute story, Landscape Turf, appeared in the September-October issue of Landscape Industry. We were very pleased to have this opportunity to put the fine turf story before professional landscape people, in this newly revitalized magazine.

The story opens, "Lawn technology and landscape design are overdue for a more adequate alliance --- " Dr. Schery reviews the technical considerations with modern turfgrasses, and concludes, "Lawn care is no longer just an exercise in mowing, --" New bluegrasses and fine fescues are brought up by name, as are old favorites such as Kenblue, Park, Pennlawn, Illahee, Highlight and so on. Suggestions are offered for autumn maintenance, including a list of commercial fine turf varieties upon receipt of a selfaddressed stamped envelope at the Marysville office.

#### ENCYCLOPEDIA BRITTANICA

During the quarter write-ups were done for Encyclopedia Brittanica, and others updated.

#### SEED WORLD SELECTS STORY

We were pleased to have appear in the October 24 Seed World, the item <u>Advantage of Seed Blends</u>, with author by-line and Institute identification. Part of the story reads, "Most of the time two or three varieties of Kentucky bluegrass are combined with a variety of two of fine fescue, in proportion suited to the local soil and climate. Bentgrasses are usually planted alone, although now that new low-growing bluegrasses such as Fylking and Pennstar are available, blends of bluegrass with Colonial bentgrasses are more feasible. Workhorse bentgrasses such as Highland are themselves genetically diversified --- thus fine fescues like Chewings, Highlight, Illahee or Pennlawn may be your mainstay under trees, Kentucky bluegrass in the open. Even with Kentucky bluegrasses, varieties such as Arboretum, Kenblue and Park hold up where little attention can be given ---".

# FINE FESCUE ITEM COMPLETED

A complete reworking of "Turfgrass Portraits II", <u>Fine Fescues</u>, done for Weeds, Trees and Turf magazine some years ago, has been completed. Details regarding origin, habits and performance have been reorganized, and especially the wealth of varieties given emphasis as indicative of the increased, more sophisticated interest in fine fescues as turfgrasses.

### SEED BLEND STORY PREPARED

An item tentatively entitled <u>Grass Seed Blends</u> was prepared for Turf and Garden Guide magazine, scheduled for appearance next spring. The exciting new developments in Kentucky bluegrasses and fine fescues are mentioned, and the reasons for blending different varieties into a seed mixture discussed.

### HERCULES REPRESENTATIVE

We were pleased to have Miss Doris Watson, Assistant Manager of Technical Promotion, Hercules, Inc., Delaware, make a special call upon the Institute December 4. There seem to be definite possibilities of cooperative activities between the Institute and Hercules, with possible participation of Hercules according to a mutually acceptable scheme. This is the sort of activity that can enhance Institute efforts effectively and inexpensively.

#### SEED WORLD PUBLICITY

The Institute was source of the "Bulletin Board Suggestions" in the November 14 issue of Seed World. Direct mention is made of the Institute in the text, viz. "If you have crabgrass in your lawn, Robert Schery, Director of the Lawn Institute, says the best defense is maintain a thick turf of perennial grasses. A dense Kentucky bluegrass - fine fescue lawn mowed tall, he says, or a thick sward of Highland bent resists crabgrass. -- ".

#### ARTICLE IN THE BULL SHEET

In the December, 1969 issue of The Bull Sheet, official bulletin of the Midwest Association of Golf Course Superintendents the Institute story <u>Winter Feeding of Lawns</u> appeared. Sample quotes: "The familiar varieties of Kentucky bluegrass, fine fescue and bentgrass are quite hardy -- ", "The same is true of the fine fescues and bentgrasses such as Highland or Penncross -- ".

# 1970 "BEAUTIFICATION SUPPLEMENT"

Robert J. Falasca of the ASTA asked the Institute to supply articles for a 1970 Beautification Supplement. Plans are for 12 pages, three colors, and with an increased circulation over previous supplements. The tentative mailing date will be February 25, 1970. Mr. Falasca states: "Last year you wrote a number of fine articles and supplied some pictures for our supplement --- I am now asking if you would be willing to do the same again this year?"

# PRESS KIT SURVEY

Included with the mailing of the 1969 autumn press kit were return post cards in those kits going to newspapers (this expense was saved in sample kits going to Institute members for their information). Nearly 700 cards were included, of which approximately 30 percent were returned. These returned cards verified personalized personalized interest in the kit, and afforded valuable comments and encouragement. Addresses for which no card was returned will not be discontinued so long as the outlet appears advantageous; there are many reasons why a card might not be mailed back, including lack of individual responsibility for the press kit (many newspapers don't have a specific garden editor). We feel that a 30 percent return was much above what is expected from this sort of survey, and flattering to the Institute. We are especially gratified to have up-to-date information concerning recipients who may have been transferred, had a change of address, and so on. Except for retirements, deaths, and suchlike, the returned cards were almost 100 percent enthusiastic, saying that the kits were useful and requesting their continuance. A few samples of unsolicited comment on return cards follow:

"Interesting and helpful in our area." - radio, Wisconsin

"Short stories and fillers are really used." - newspaper, Illinois

"This kit seems the newsiest to date!" - newspaper, Maine

"I make good use of this material in my teaching and extension work." - educator, Massachusetts

"We enjoy these kits and make use of the material on our weekly Garden Page." - newspaper, Indiana

" -- Will do a Lawn Feature soon and send you a 'tear sheet' containing it." - newspaper, New Jersey

"You folks are doing a wonderful job and the items you carry are very helpful. Best of its kind - anywhere!" - columnist, New York

## WHAT THEY ARE SAYING:

"I enjoyed and benefited a great deal from the talk you gave at the recent Sod Growers' Association here in Ontario. I am sure the rest of the group got a great deal out of it."

> Gabriel Eros, General Manager Ontario Seed Cleaners & Dealers, Ltd.

"We sincerely appreciate your participation and your excellent presentation to the sod growers."

> N. M. Rothwell, Gen. Sales Mgr. Maple Leaf Mills, Ltd.

"Also thanks for the two fine articles found in our bus tour grab bags. These were of your usual good writing ability."

William Cromer Beachley-Hardy Seed Company

"I recently asked for some advice on my lawn. Your reply together with two reprints were some of the most concise and informative material on lawn care that I have seen in a long time. Thank you and my congratulations."

> J. M. Wilkinson Springfield, Virginia

"I am looking into the possibilities of starting a lawn mowing and maintenance business, and your name has been supplied me by the U. S. Dept. of Commerce as a source of helpful information."

> V. M. Orton Aurora, Colorado

"Numerous reports are back on the PURR-WICK system. Thanks for your extensive part in helping. Sure appreciate the time. Your ability to write is most evident."

> William H. Daniel Purdue University

"I am preparing my files for student teaching. I would appreciate if you would send me information on spring and autumn press kits which you advertised in the Directory of Free Teaching Aids. Thank you."

Miss Barbara Hudak Annhurst College

"You did your usual good job presenting information on turf and their uses. I hope that you enjoyed your stay in Oregon as much as the seed growers enjoyed having you here. I appreciate your business-like method of handling the papers. They will be in the Proceedings".

> Rex Warren Oregon Seed Growers League