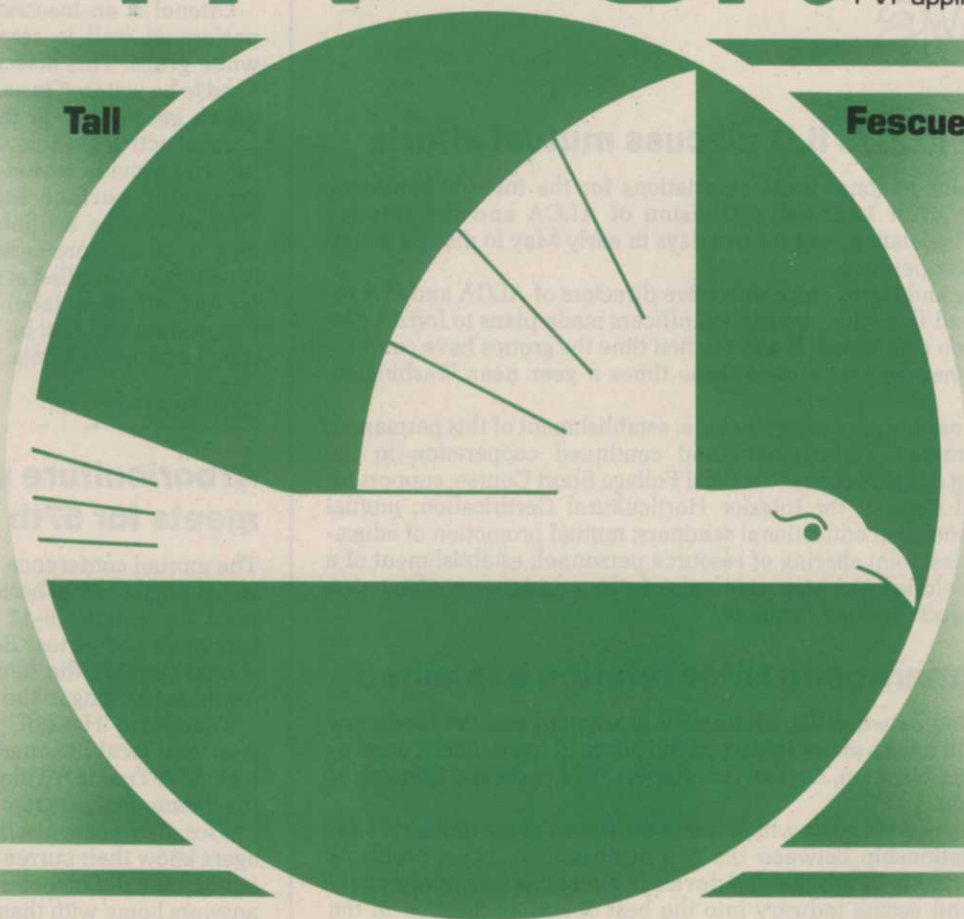


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LANDSCAPE

CONTRACTOR NEWS

IPA and ALCA/ILD discuss mutual efforts

The two major national trade associations for the interior landscape field, the Interior Landscape Division of ALCA and the Interior Plantscape Association, met for two days in early May to discuss potential areas of cooperation.

John Shaw and Carol Felix, executive directors of ALCA and IPA respectively, and five other association officers made plans to form a permanent liaison committee. It was the first time the groups have come together and they will now meet three times a year near Washington, D.C.

Areas of possible joint effort include: establishment of this permanent liaison committee; endorsement and continued cooperation in the programming of the National Tropical Foliage Short Course; support for the National Council for Interior Horticultural Certification; mutual member discounts at educational seminars; mutual promotion of educational activities; joint sharing of resource personnel; establishment of a mutually developed, industry wide code of ethics; and cooperation on association projects and publications.

Nurseryman-contractor relation explained

The interaction between the wholesale nurseryman and the landscape contractor will have a major impact on the future of the industry, according to a new publication, *Crystal Ball Report IV: Landscape Contractor & Nurseryman*.

The report gives six goals which frame the future of the industry, analyzes the relationship between the two businessmen, notes problems seen in relationship by groups, and develops directions for improving relationships and easing industry into the best operating position in the future. The Associated Landscape Contractors of America prepared the report with the assistance of the American Association of Nurserymen. Copies are \$10 each from ALCA, 1750 Old Meadow Road, McLean, VA 22102.

Milwaukee Technical wins student field day

With the home field advantage, Milwaukee Area Technical College defeated five other schools at the fifth annual ALCA Field Day held in early April. The students of the two-year program also did a fine job of organizing and running the event.

Mississippi State ran second in the competition and Ohio State took third. Oklahoma State, Michigan State, and Ohio Agricultural Technical Institute also competed. For its victory, MATC received a plaque and traveling trophy, which it retains until next year's event.

The competition included a landscape design problem, cut and fill estimating, maintenance estimating, small engine troubleshooting, indoor plant identification, woody plant identification, rope and saddle tree climbing, a dump truck obstacle course, landscape construction, Bobcat operation, and mower operation. Jim Bakke was student chairman and John Schaeffgen was faculty advisor to the student club.

First joint show held in North Carolina

Nurserymen, landscape contractors, and landscape architects got together for the first time in Charlotte, NC, to discuss mutual challenges of the future. The event attracted nearly 1,000 businessmen and 140 exhibitors in an astonishing first effort.

News from page 8

Oftanol is an insecticide which has performed well in research trials for white grubs. This insecticide does not need to be watered in as do insecticides which get tied up in thatch. The five percent active granule applied in mid-July can provide season-long control of grubs and surface feeding insects. Oftanol will be available in July and only in 20 or more eastern states. The insecticide is applied at 40 lbs. per acre for turf. A federal label is pending and the product will first be labelled under state local needs labels.

CONFERENCE

Arboriculture society meets for 57th annual

The annual conference of the International Society of Arboriculture, scheduled for August 9-12 at the Boyne Mountain Lodge near Boyne Falls, MI, should provide the latest information for those working in the profession.

Theodore Haskell, general chairman, and local ISA members, have selected "A Tree ISA Thing of Beauty" as the theme. The program will update all phases of tree care at a time when managers know their current problems and equipment deficiencies and can take answers home with them.

A large array of commercial products and equipment for the tree care industry will be displayed and demonstrated. Educators and researchers will hold a concurrent meeting to exchange views on current education and research programs. Top-rated tree climbers throughout the U.S. and Canada will compete in the sixth annual jamboree contest.

For more information, contact: E. C. Bundy, ISA Office, P.O. Box 71, Urbana, IL 61801.

UNIVERSITY

Virginia Tech names Fretz as hort head

Thomas Fretz has been chosen to head the Virginia Tech Department of Horticulture. He assumes responsibilities from C.L. McCombs, who has served as department head since 1971.

Fretz begins his role at Virginia after heading the horticulture department at Kansas State University since 1979 and, previous to that, serving as associate professor at Ohio State University. He has been editor and publications chair-

GOVERNMENT

UPDATE

man for the American Society for Horticulture.

Fretz received his undergraduate degree in agriculture from the University of Maryland in 1964. He achieved his master's and doctorate at the University of Delaware.

NEW GROUP

Wisconsin organizes turfgrass association

The Wisconsin Turfgrass Association, which held its organizational meeting last fall, has set its first aim at establishing a more comprehensive research turf program specifically for Wisconsin growing conditions and problems.

Plans are underway to work closely with the University of Wisconsin, School of Agriculture, to upgrade turfgrass research in the State of Wisconsin. Dr. Gayle Worf, University of Wisconsin extension plant pathologist, has agreed to organize the initial research efforts.

Initial members represent sod production, golf course maintenance, landscape contracting, lawn care, and other allied turf fields. Membership is open to any person or organization interested in improving Wisconsin's turfgrass program.

For information and applications, contact Tom Harrison, 1218 Winn Trail, Madison, WI 53704.

NEW GROUP

Massachusetts forms forum for pesticides

A forum of people interested in a rational approach to pesticides has organized in the state of Massachusetts to disseminate accurate, unbiased information to the public.

Members of the group, Rational Approach to Pesticides, are involved in the everyday application or distribution of pesticides for protection against insects, rodents, diseases, weeds, and nematodes. Officers are planning to discuss their goals with the state's governor and other legislators.

The following state associations are members of R.A.P.: Associated Landscape Contractors, Golf Course Superintendents Association, Arborist Association, Association of Professional Foresters, Farm Bureau Federation,

Continues on page 51

Gorsuch Gets Nod for Top EPA Post

Despite early grumbling that Colorado lawyer Anne Gorsuch was not qualified or sensitive to the environmental cause, both Houses unanimously approved her nomination as well as the nomination of her deputy John Hernandez.

EPA insiders believe Gorsuch will direct a total reorganization of the agency and say she is greatly influenced by Secretary of the Interior James Watt, who has already established a record scorned by some environmentalists.

Responding to questions from the Senate Committee on Environment and Public Works, Gorsuch said she was committed to regulatory reform, finding the least costly options, giving states more of the responsibility and more incentive, and changing the image that EPA employees are "mad environmentalists."

Hernandez, a former dean of the New Mexico State University College of Engineering, also stressed increased environmental enforcement by states. He pointed out that the agency has highly qualified people who have too often been rushed to make determinations on scientific matters, thus wasting the agency's money and making decisions without adequate consideration of their economic impact.

NAA, PLCAA to assist in EPA urban study

The Environmental Protection Agency has solicited the assistance of the National Arborist Association and the Professional Lawn Care Association of America in a survey of urban pesticide usage. The associations will help in development of the questionnaire for the survey and their members may then be asked to participate in the confidential survey.

According to NAA, the data from the survey will be used for risk/benefit analysis, environmental monitoring, and improved registration and enforcement procedures. NAA also sent out a special mailing to members stressing the seriousness of following label guidelines and taking needed precautions to guard contamination of water, bird feeders, dog dishes, children's toys, and adjacent property. NAA must be communicating the signals it is getting from EPA.

Year extension of FIFRA likely at \$62 million

Both the House Agriculture Committee and the Senate Subcommittee on Agricultural Research and General Legislation are expected to approve legislation extending the Federal Insecticide Fungicide and Rodenticide Act to 1983 and extending the existence of the Scientific Advisory Panel to 1985.

Rep. Fithian (D-IN) voiced the need for additional funding to support states in applicator recertification and to maintain the current level of pesticide registration decisions. The one year program extension indicates a review of FIFRA implementation by EPA will take place before further funding is approved. The House bill has passed committee and the Senate bill will enter hearings this summer.

Elanco aquatic control has permit extended

An aquatic herbicide containing fluridone has received an extension for its experimental use permit from the Environmental Protection Agency according to Elanco. Tolerances for fluridone residue in fish have been established so fish from the test lakes can be consumed.

New fungicide enters registration process

Ciba Geigy Corp. has submitted an application to register TILT 3.6E, a member of the triazole family of fungicides, for rusts and powdery mildew in grasses grown for seed. This use is often a preliminary step to registration for turf uses. Ciba Geigy has been working on fungicides for extended control in turf. Bayleton by Mobay was recently labelled for 28-day control of diseases in turf.

STANDARD RECOMMENDATIONS AND SHORTCUTS ARE TESTED BY DROUGHT

By Bruce F. Shank, Editor

The landscape professional has been working in drought conditions for more than a year now. He has adjusted maintenance programs and made changes in his recommendations to show customers that landscapes need not be sacrificed when availability of water is reduced.

Drought has tested his skill and forced him to realize that the future will present challenges requiring a thorough knowledge of horticulture to solve. Drought, reduced maintenance, and energy conservation are just a few of the challenges to be faced in the 80's.

Renovation of drought damaged turf and landscapes this late summer and fall should reflect the experience gained with drought and anticipate the needs of the future. Showing the customer you can protect him from future disasters will be important.

Drought basically taught us that standard recommendations and a few accepted shortcuts allow little protection when water gets short. Typical shortcuts, such as poor grading and seedbed preparation, use of cheaper varieties of turf seed, inadequate irrigation, and minimal care after installation can be blamed for serious turf losses. At the same time, dependence on exotic turfgrasses, excessive irrigation, overfertilization, and mowing for carpet-like appearance have brought the same losses. The money shortcuts saved could have prevented the need for renovation now. The extra money spent on trying to be special has been lost.

Renovation ought to be a significant market this coming fall and spring.

Obviously, we can not return to unmowed fields of native grasses and sheep. Landscapes must be functional as well as attractive. We can, however, apply what we know to be true and refuse to make shortcuts. The landscape architect, sod producer, and landscape contractor must resist shortcuts to get lower bids. The grading has to be right. The seedbed has to be properly worked, amended, and fertilized. Irrigation should be included in any fine turf area. The sod grower should supply improved varieties and the seeding contractor's seed mix and rates should be carefully scrutinized. Followup fertilization and weed control should be strongly advised to the customer. Sensible irrigation and mowing schedules should be recommended.

Renovation ought to be a significant market

this year. The value of a knowledgeable contractor will hopefully be recognized by those that lost their lawns. The contractor can improve the customer's lawn as he restores it. The importance of rootzone, turfgrass variety, proper irrigation and mowing, and chemical maintenance can be taught to a new group of customers. Approach renovation from the standpoint of turfgrass and its environment. Offer the periodic services which customers find inconvenient, including aerification, soil testing, thatching, fertilization, weed and insect control. Educate them to their role in mowing at proper heights and irrigation only when needed. Get the customer interested in his lawn once again.

Drought: Causes and Effects

Drought damage to turfgrass occurs when the cell walls remain rigid while the cell contents dehydrate and contract. This stress eventually causes death of the cell. Grasses have natural reactions to drought stress most commonly evident as summer dormancy where all but a few buds in the crowns, stolons, or rhizomes die. The dead leaf tissue helps insulate the live cells from further damage. Kentucky bluegrass and bermudagrass are recognized as good recoverers from dormancy. Annual grasses may seed prior to summer drought for fall germination.

Certain conditions can encourage drought damage. These include poor rootzones (pH, texture, lack of potassium); overfertilization with nitrogen, causing too much foliage growth; mowing too low; exposure to dry winds; steep slopes; and turfgrasses with poor rooting characteristics.

Warm season grasses such as bermudagrass, zoysiagrass, and bahiagrass have developed natural characteristics to survive drought and high temperatures. Use of these grasses north of the transition zone, however, is not very practical. Cool season grasses such as hard, tall, and red fescue exhibit good drought tolerance. Improved varieties of tall and hard fescues offer the greatest hope for low maintenance in the north if cold hardiness can be achieved.

These grasses possess water conserving characteristics. The roots are deep, aggressive, and well-branched. Root hair zones are well-developed. They also retain moisture with thick, waxy surfaces and folding or rolling leaves, and have very small plant cells which resist dehydration stress.

Creeping bentgrass, rough bluegrass, and centipede are not drought resistant. Perennial ryegrasses are not as tolerant as Kentucky bluegrass.

Continues on page 16

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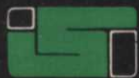
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*Testing was done on a 2:1 slope. After soil preparation, the plots were seeded and mulched in one operation and allowed to lay overnight. Simulated rain controlled at the rate of four inches per hour was applied until a targeted deterioration of the surface occurred. Product effectiveness was evaluated by "apparent" rate of erosion which was calculated by dividing the total time until deterioration by the weight of the material eroded.

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Shortcuts from page 14

Summer drought stress is a natural phenomenon which will not cause permanent damage to the turf providing there is adequate fall moisture for recovery. However, if drought continues into the fall and the still dormant turf enters winter, permanent damage can occur.

Distribution of components in polystands will change in favor of the fescues.

Polystands of Kentucky bluegrass, red fescue, and perennial ryegrass become primarily red fescue. The desired bluegrass or ryegrass will probably not be present or distributed in the turf in the desired way the following year. The turf will appear thin and dead grass will be evident throughout. If drought continues, even the fescue will not creep to replace the bluegrass and ryegrass. Sod takes longer to transplant.

This is the state of millions of lawns in the Northeast. Improved spring rainfall and proper fertilization will not bring the typical recovery property owners expect after summer dormancy. Water rationing is still enforced in sections of New Jersey. Many homeowners are doubtful that irrigation water will be in adequate supply in the future. They will hesitate to invest in turfgrasses which require irrigation for proper maintenance.

Drought Maintenance

Beside the inherent nature of some turfgrasses to withstand drought, certain steps can be taken to reduce stress. Mowing height should be raised to encourage deeper rooting. Soil tests should be performed to establish any deficiencies in potassium, phosphorus, and minor elements. Only needed amounts of nitrogen should be applied. Irrigation should be less frequent but thorough and concentrated to desired areas. Aerify to help water infiltration and improve soil air content. Application of wetting agents may be worthwhile to get more benefit out of limited water. Try to restrict traffic in turf areas.

Recovery and Renovation

Many regions of the U.S. have had to think little about water until the past year. West Coast property owners have lived with water shortages for many years and have set standards accordingly. Turf areas are assigned a priority. High priority areas receive irrigation, extra attention to rootzone, and improved sod. Remaining areas are planned and constructed for low maintenance and cost. Priority setting could be one way of making proper renovation attractive in the East and Midwest.

This way a property owner can retain the pleasure of an attractive lawn while doing his

part to conserve water. Since loss and permanent damage of some shrubs and ornamentals is also likely, the priority plan assures that all desired plants will be protected while secondary landscaping is designed for low maintenance. It shows the customer that the landscape professional has options not previously well-known.

Once priority has been established, the appropriate work and material can be determined. The turf environment should be considered first. Soil tests should be made. Drainage, soil texture, exposure to sun and wind, slope, and the remaining grass should be evaluated. Corrective measures should be evaluated for both high and low maintenance areas.

A good low maintenance Kentucky bluegrass or fescue should be selected for low maintenance areas. Chemical renovation with glyphosate (Roundup), thatch removal, and mowing prior to seeding will provide the best turfgrass stand. Any soil nutrient deficiencies should be corrected prior to seeding.

Once established, the low maintenance areas should receive only the care needed to prevent weed encroachment.

Improved rainfall and fertilization will not bring about typical recovery from summer dormancy due to drought.

High priority areas should offer control of the turf and its environment. Irrigation should be possible. The rootzone should be amended to a depth of four inches. Nutrient, organic content, and water repellent properties should be solved.

These areas should receive top quality sod or seed. All progress in turfgrass breeding should be applied to the situation. Aggressive, disease resistance, and drought tolerant turfgrass should be selected.

After establishment, this area should be maintained for appearance without excessive growth. The idea is not to splurge, but to protect the high priority areas from future crises. **WTT**



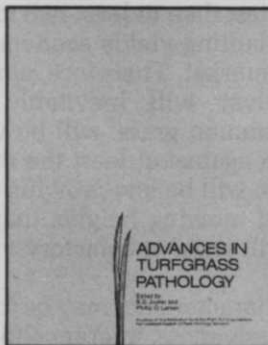
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Scheduled for publication January 30, 1981. Order will be fulfilled within 60 days of the date of order. **WTT**

CONSIDER NEW TURF CULTIVARS FOR POST-DROUGHT RENOVATION

By Robert W. Schery, Director, The Lawn Institute, Marysville, Ohio

All new cultivars have favorable basic characteristics, or the expense of bringing them to market would not have been undertaken. Typically it requires several years to test a cultivar and build up foundation seed supplies; then at least two more years before a field planting yields economical quantities of seed for market. Therefore, almost any proprietary cultivar will inevitably be better-looking than common grass, will be well screened for tolerance against at least the more commonplace diseases, will be low-growing and thus denser at normal mowing heights than is common grass, and will show satisfactory vigor and adaptability.

Beyond this, other characteristics may be more individualized—aggressiveness, tolerance to extreme acidity or alkalinity, response to treatments (such as phytotoxicity from pesticides), compatibility, thatch formation (related to aggressiveness), tolerance to insects, mowing neatness, wearability, richness of color, resistance to smog, and so on. But remember that cultivar ratings reflect conditions of the moment, in a particular area, under a certain regimen. Disease virulence is largely a matter of coincidence. And different experts have differing likes and expectations! Thus it is not surprising that a cultivar is seldom top choice everywhere, or even at a given location two years running. Were I to characterize even just the Variety Review Board cultivars here, a dreary recitation would be needed spilling over many pages, noting qualifications and exceptions. It is just not possible to give an

Seldom is a cultivar top choice everywhere, or even at a given location two years in a row.

unqualified endorsement; yet, any cultivar is capable of first-rate performance if influences are reasonably favorable.

However, a few generalizations seem valid that may offer guidance for choosing lawnseed:

1. Often discoveries from nature, having been exposed to the rigors of natural selection, adapt a bit better to neglect than do highly bred choices. On the VRB list, domestic adventives such as Arboretum, Glade, Merit, Nugget, Plush, and Vantage lean this way, as do certain cultivars introduced from Europe (e.g. Baron, Fylking). Park and Kenblue represent common-type naturalized bluegrass populations from Minnesota and Kentucky respectively, but beware of unspici-

fied common bluegrass since it is often high-yielding Newport, an older cultivar without many fine-turf qualities.

2. No turfgrass, even a fescue, is at its best without some fertilization. A feeding rate of two pounds elemental nitrogen per thousand square feet annually as part of a complete fertilizer should be roughly the ecological breaking point on most soils for stimulating grass dominance over competing forbs (weeds). Complete neglect risks thin, weedy turf, no matter the cultivars chosen.

3. Vigor and density are energy-saving attributes in that they enable the turfgrass to compete well, crowd weeds, and depend less on pesticides. Most domestic hybrids such as Adelphi, America, Bonnieblue, and Majestic are of this ilk, as is Enmundi from Europe. They have generally been proven out under fertilization; they may or may not do well underfertilized. Chosen for outstanding performance on golf courses or athletic fields, which are generally reasonably well tended, are such notables as Merion, Ram I, and Touchdown, and Birka and Sydsport from Europe. The more vigorous of these cultivars may thatch a bit if earthworms and microorganisms cannot cope with heavy inputs of vegetation under your environmental circumstances. Incidentally, lawn clippings increase thatch very little; they consist of succulent tissue quickly decomposed. However, fast-growing turfgrasses are likely to require mowing a bit more frequently, an energy-related factor to be considered.

4. Differences between the perennial ryegrass cultivars are not so apparent, and most of the cultivars can be utilized interchangeably. Citation, Diplomat, Omega, and Yorktown II seem to be relatively nonaggressive, but the ryegrass component in turfseed mixtures is nonetheless best held to about 20% lest slower-starting bluegrass be repressed. Almost all of the recent ryegrass releases have tolerable winter hardiness, Manhattan and NK-200 being acknowledged for suitability even in more northerly regions. Pennfine and Regal get good marks for hot weather durability. Derby rates highly, and like Blazer and Fiesta enjoys quite a winterseeding usage on dormant bermuda in the South.

5. Chewings fescue cultivars are very handsome in favorable locations, but often become irregularly clumpy in hot-humid weather. They may disperse less comfortably in a bluegrass matrix than does ryegrass. Fine fescues are a poor-soil grass, often colonizing dry areas under trees receiving little or no fertilization, and enduring

Continues on page 20

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well-drained sandy soil outcrops. Cultivar differences are less marked than with bluegrasses.

6. Slight differences are noted among bluegrass cultivars in ability to hold up with little or no summer watering, Arboretum being a case in point. Under eastern conditions, Bonnieblue, Enmundi, Glade, Nugget, Plush, and Ram I have all endured greater acidity than most; on alkaline soils in Colorado, Adelphi, Baron, Fylking, Ram I, and Sydsport have remained non-chlorotic. Differences of such nature are not great, however, and are often overshadowed by maintenance and climatic variables. Normally, east of the Mississippi irrigation is not necessary for turfgrass survival, although, (obviously) during dry spells a lawn will look prettier if watered. In the arid Southwest, however, turf is not possible at all without irrigation. Generally fescues are considered more tolerant of drought than bluegrasses, bluegrasses more drought-tolerant than ryegrasses. Some summers in Ohio have reversed these expectations, with perennial ryegrasses staying green and attractive longest without any watering.

Drought damage offers the opportunity to introduce newer, pedigreed cultivars.

It is apparent that one can't prescribe with confidence the "best" turfgrass species, or cultivars of that species, since so much depends upon user preferences, location, level of care, and so on. Fescues are perhaps best adapted to minimal fertilization, but much depends upon native fertility of the soil and other influences. Most bluegrasses and ryegrasses get along quite well at modest levels of fertility, Merion and other vigorous cultivars being more demanding. Weeding requirements are usually reduced by fertilization, since nitrogen encourages grass at the expense of broadleaf weeds. Vigorous grass, encouraged by autumn feeding, provides a good base, but additional weed clean-up will be needed occasionally (as with selective phenoxy herbicides such as 2,4-D, or crabgrass preventers).

Pest control measures for insects and especially diseases are most effectively handled by establishing natural balances and by planting resistant cultivars. A typical homeowner is not equipped to diagnose lawn disease, nor to apply proper fungicides accurately. Fortunately, most modern cultivars are remarkably tolerant of disease, especially when several are blended together in the lawn population. Changes of weather or season lend a big assist. Knowledge of

insect resistance is not so far along, although resistance to such things as sod webworm and other pests seems to vary among cultivars. An insecticidal drench may occasionally be necessary if one's lawn becomes severely infested, but minimization of damage can usually be achieved by encouraging predators of the pest insects. This idea has perhaps been most successfully explored in Florida, although the possibilities would seem promising anywhere.

In spite of a homeowner's best efforts, calamities occasionally will occur. Such was the case in 1980, with the extreme weather over much of the eastern half of the nation. From Texas through Missouri to Minnesota record heat and drought wiped out many lawns, as also occurred along the eastern seaboard where, autumn refreshment did not come sufficiently soon to allow repairs in 1980. Yet in Ohio, inordinate rainfall in early August kept soil waterlogged and "drowned out" much vegetation before drought set in through September. Lawns in such areas may call for repair, which offers opportunity to introduce newer, pedigreed cultivars perhaps a bit better suited for lawns than the mixed assortment previously had. It is possible in these days of knock-down chemicals (glyphosate, for example), to free a lawn of remaining unwanted vegetation before seeding. Then scarify the surface mechanically (use powered scarifiers or turf seeders for large areas) before spreading seed and following customary cultural practices. If the timing is questionable and patching imperative, consider the fast-starting perennial ryegrasses; well-seated, they will provide incipient cover with just a few days of warm, moist weather.

Whether or not the United States will continue to direct as much attention toward its lawns as in the past, in the face of mounting national contingencies, remains to be seen. Almost nowhere else in the world has lawn making so flourished. In Europe many houses traditionally have been built flush with the street, eliminating front yards. With a dense population for centuries, little space could be accorded plantings that were decorative only (the backyards are mostly utilized for vegetable gardens and for fruit production). But in the United States, spacious home grounds are still the norm, except, perhaps, in congested metropolitan centers. The cost of land has now increased, however, to a point where new housing often entails small lawns or communal grounds such as those of the condominium.

Yet, it will be a long while before the spacious suburban home is a thing of the past, and the most efficient way to accommodate it to the landscape is with a lawn, hopefully one requiring minimal bother and cost. But, as was noted earlier, no form of vegetation is without care and some prob-

Continues on page 50