

## The critical hire — superintendent — was omitted

To the Editor:

In the December 1990 issue of *Golf Course News*, the article "Golf Course Europe" contained comments by ASGCA (American Society of Golf Course Architects) President Dan Maples stating that "the key to a successful golf course development is assembling a professional team. Included should be an experienced land planner, civil engineer, golf course architect, housing architect, attorney and financial consultant."

How sad that the golf course superintendent was omitted from his statement. Who is better qualified to assist in grass selection, determine initial start-up costs, labor requirements, maintainability and the necessary equipment, in addition to establishing budgetary demands?

Would new developments have an increased success rate if a qualified golf course superintendent were included as part of this professional team?

Could maintenance costs and construction problems be reduced while maintainability is increased?

Would developments be better prepared for the tremendous start-up costs of golf course construction and maintenance — primarily the first year, but certainly second and third years as well?

Food for thought, certainly.

Sincerely,  
Mark J. Hoban, CGCS  
President  
Georgia GCSA

## Not mixing irrigation with great architects

To the Editor:

In November's issue were listed golf course architects headquartered in the United States. I was honored to be on the roster with such great people as Jay Morrish, Tom Fazio, Bob Cupp, Art Hills, Roger Packard and Scott Miller. The truth of the matter is, Larry Rodgers is an irrigation consultant to golf course architects, not a golf course architect, as you listed.

My only attempt at design was a three-hole course on a friend's ranch. It was this humbling experience that taught me just how important selecting a quality golf course architect is. I am quite happy in my role as the irrigation designer on the many fine projects I have been involved with.

Thank you for putting my name in print in

association with such great architects. My role in the golf course design field is an important one, but the art and strategy must come before the mechanics of golf course architecture.

Sincerely,  
Larry Rodgers  
Lakewood, Colo.

## Comment

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tens of thousands of people who would no more have Sundays with their families?

Let's be **golf-ologists** and be a part of the solution.

Jerry Gelinas, vice president of marketing with Club Corporation of America, said potential club members "want benefits that fit theirs' and their families' needs. We've found a strong trend toward the entire family becoming part of the club environment."

Gelinas said families offer a major opportunity and a more stable membership for a club.

So, business-wise — as well as good neighbor-wise and plain good citizenship-wise — getting entire families involved in golf is a positive for golf courses everywhere.

What can you do? Ski areas are finding success with one tactic: Giving "first-timers" the opportunity to ski free of charge (including skis, poles and boots in some instances) on a particular day. Other ski areas offer ongoing teaching programs for very little money.

This is all geared to teach young and old alike the sport so that they can enjoy it to its fullest — and return and keep returning.

Would this be difficult for golf courses to do?

Courses could offer special "family" green fee discounts, or father-son discounts, husband-wife discounts... the list goes on. Biting the bullet today could mean eating a meal of success tomorrow.

Let's give the many "golf widows" new life by bringing them out, showing them respect, and honestly illustrating that they are welcome.

Junior programs, women's programs, teaching for the physically challenged... the opportunities are boundless, the untapped ideas endless.

Let's be inventive. It will help our business, our society, and perhaps even our self-esteem..

# Roberts: Answering tough questions

BY ELIOT C. ROBERTS

Reports of municipalities in the more densely populated parts of the country considering landscape restrictions and ordinances have become more common. To some degree, this is related to increasing interest in Xeriscape, which emphasizes use of native vegetation with proposed reductions in water and energy use for maintenance. A back-to-nature or natural practices philosophy has appeal, particularly in densely populated regions where in recent years much of nature's value has been tarnished by pollution of various sorts.

Of the many questions asked The Lawn Institute, seven are key to better understanding landscape quality and environmental relationships. These are:

- 1) Which are better, trees or grass, in taking carbon dioxide out of the atmosphere and returning oxygen?
- 2) What does landscape sustainability have to do with landscape value?
- 3) What is really the goal of most new landscape ordinances?
- 4) How can we deal with landscape plans, regulations and specifications?
- 5) Are energy costs unreasonable in landscape maintenance?
- 6) How much idealism is behind demands for landscape change?
- 7) Why do we so often read in news stories that turfgrasses are an enemy?

Answers to these questions should help clarify some important issues.

Q — We hear a lot about photosynthesis using carbon dioxide out of the atmosphere and releasing oxygen. What does it all amount to? Which are better doing this, trees or grass?

A — This type of comparison makes woody plants look good and turfgrasses look poor, but it doesn't present the whole picture. All carbon fixed in organic matter (biomass) oxidizes in time. This may be fast — such as burning — or slow (by) decomposition. In decomposition, micro-organisms are involved and humus is formed, enriching the soil.

Woody plants contain a lot of carbon and therefore may take years to die and decompose. Or they are harvested for construction, pulp or fuel. Ultimately, virtually all of this carbon ends up back in the earth's atmosphere and there is very little net gain in oxygen.

With turfgrass, clippings decomposed continuously as long as temperatures are warm and the soil is moist for microbial activity. This enriches the soil and improves its structure so that water drains better and erosion is reduced.

This benefit is far more important than the so-called balance of carbon-dioxide and oxygen.

When considering a closed system where wood may be removed and replaced regularly with immature plants, the gain in oxygen cited for woody plants may be expected.

In an open system, characteristic of the real world, biodegradation of wood is continual so that atmospheric gains in oxygen are not realized.

The "liability" of turfgrass not accumulating more carbon over time becomes an asset in providing carbon energy for some 45,000,000,000,000,000 [quadrillion] microbes living in every 1,000 square feet of turfgrass root zone. These soil-building organisms require carbon as a source of energy for natural humus-forming processes.

Since terrestrial plants that fix carbon through photosynthesis all biodegrade, and consume oxygen and release carbon dioxide back to the atmosphere, where has our at-



Dr. E. Roberts

mospheric oxygen come from?

The 20 percent oxygen found in the atmosphere is quite stable. Much more or less would make life hazardous for both plants and animals. The biotic origin of oxygen is aquatic, or at least plants and animals that have their final resting place under water where anaerobic decomposition is prevalent. Deposits of carbon containing coal, oil and natural gas have all formed under these anaerobic conditions.

Thus, our fossil fuels of stored carbon, which originally came from carbon dioxide in the atmosphere, are only now being burned. Had these sources of carbon not been discovered and used, we would most likely have been limited to burning wood as a source of energy.

With finite amounts of fossil fuels available, we must look for other sources of energy.

Providing positive levels of carbon storage and oxygen productivity are the least likely of all landscape benefits to be realized. To be sure, every little bit helps, and we should promote the concept of living plants in the landscape. They are infinitely better than the alternative — dust and dirt, asphalt and concrete.

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# Lawn Institute's Roberts answers course foes' questions

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Q — What does the new buzzword "landscape sustainability" mean?

A — Catch words, like "sustainability," are technically not very meaningful. Agriculture today is accused of lacking sustainability. The term is no better understood concerning agriculture than landscaping. (Reference: Alternative Agriculture - Scientists Review, Special Publication Number 16, Council for Agricultural Science and Technology, Ames, Iowa, July 1990. 182 pages.)

Sustainability in agriculture and in the landscape is a complex concept. Most conventional farming

practices contribute to a sustainable system. That is, they help crop production, promote yields at economic levels and help conserve soil and water. The same holds true for most landscape construction and maintenance practices. Most of these being used today are the result of hundreds of millions of dollars spent the past 50 years for research. Commercial research dollars and public funding of Land Grant University Agricultural Experiment Stations have supported most of this research. The Current Research Information System of the U.S. Department of Agriculture identifies some 300 research projects on turfgrass alone.

Often the issue of sustainability is linked with use of chemical fertilizers that are alleged to poison the soil and increase disease and insect problems of plants so that more pesticides are required. The proposed alternative is use of natural organic fertilizers and elimination of all pesticides.

Agricultural Experiment Station research across the country has not demonstrated undue risk from normal use of chemical fertilizers. Nor is there evidence that use of natural organic fertilizers can reduce weed, insect and disease problems to the point where pesticides are no longer needed.

Thus, sustainability is widely ac-

cepted in general agriculture and in landscape horticulture. This does not mean that there haven't been over-uses of fertilizers and pesticides in isolated instances. As with all excessive use, risk increases. It's the dose that makes the poison.

A sustainable landscape promotes practices that conserve, recycle and reuse the resources invested in these landscapes.

All landscapes should be designed and maintained to incorporate organic soil management practices. But inorganic fertilizers, herbicides and pesticides must not be excluded. When properly used, risk to people, animals, plants and environment is not unreasonably

increased.

It will be interesting to speculate how effective programs to educate the public about ideas and benefits of sustainable landscapes will be when accurate technical information is so scarce. Perhaps it will be a matter of dis-education.

Q — What is really the goal of most new landscape ordinances?

A — It's difficult to understand the meaning of many of them. The bottom line often seems to involve use of water, fuel for equipment, fertilizers, pesticides and labor in landscape construction and maintenance. Some group must feel that there are excesses in one or more of these inputs. If this is so, landscape professionals should recommend changes. If policies and guidelines are left to the political system, the landscape quality of the community will surely suffer.

A successful landscape improves the functional and aesthetic environment. Cost/benefit studies may show some landscapes more costly than others, but what does this have to do with success as long as someone is willing to pay? Some people drive Lincolns, others Fords. The landscape creates and/or modifies space.

It makes better places to live, work and play. Remove it and the inert environment of the central city is left.

Now, some people prefer this environment and live in areas devoid of interiorscapes or external landscaping. Most residential development favors a well-planned landscape. If a certain landscape imposes environmental costs, such as pollution, then it is ill-conceived. It is not helping the environment, although it may look good.

These landscapes require modification so the functional environment is improved. Often this means sound soil-plant management and not elimination of water, fertilizer, pesticides, fuels or labor.

Many times it seems the community plans to "throw out the baby with the bath water." It is worth emphasizing "this ordinance must involve and combine larger issues if the environmental foundation for landscape development is to be integrated into cultural, political, aesthetic and economic factors of positive urban development."

The landscape enhances the aesthetic and functional life for people, animals and plants. This is environmental health.

However, there are limits. In high-population areas, the landscape may fight a losing battle in maintaining environmental quality.

Use of accounting procedures to measure the magnitude of decisions and practices is valid. Interpretation of data must be handled with care. Performance standards are difficult to come by for living entities. It's a good objective, but must be administered by technically well-qualified horticulturists and agronomists.

Q — Landscape plans, regulations and specifications seem to stand in the way of successful development. How can we deal with this?

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GOLF COURSE NEWS

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# Roberts

A — Guidelines are the answer. Development plans and permits are appropriate in regulating land use. Dealing with engineering and construction specifications for soil and building materials is one thing. Landscape specifications cannot be so tightly administered without the ultimate demise of the intended plant material. Each site and case is different.

Formulating rules, procedures and interpretations for biological systems probably will have limited constructive value and, more likely, enormous negative value. With biological systems, there are more exceptions to the rule than there are rules.

A "sustainable landscaping guideline manual" must emphasize the word "guideline." It's interesting to note that in an alternate title "sustainable landscape design manual" suggested by one community, the term "guideline" had already been deleted. This is a move in the wrong direction.

Compliance statements indicate little flexibility and forecast ultimate failure in the use of such a document.

Landscapes designed with plants that have similar climate, water, soil, sun exposure and maintenance needs are, for the most part, natural landscapes. They are desirable but the landscape benefits that can be obtained with diverse plant materials.

Landscapes with reduced amounts of turfgrass greatly restrict functional and aesthetic aspects of many landscapes. When this is done, a non-living mulch is often substituted for a living mulch (turfgrass).

Q — Are energy expenses unreasonable in landscape maintenance?

A — Energy costs are interesting from the standpoint of alleged waste. In the first place, the value of the landscape in creating habitats of highest quality is well worth the cost.

Secondly, hundreds of thousands of professionals make a living from landscape construction and maintenance, and other do-it-yourselfers gain personal satisfaction and exercise from gardening.

The agribusiness impact of lawns and sports turf is estimated at more than \$25 billion a year. Turf and landscape products are not more energy-demanding than other products used about the home and in pursuit of recreation.

In regions where air pollution and water shortages are increasingly severe, it is necessary to recognize the effects of high population. Only population reduction can improve quality of life. More concrete canyons mean more pollution of ground and water that has limited exposure to the roots of plants.

For those who understand the function of grass plants in soil-building, the statement: "the primary goal of urban landscapes is to build upon the functioning and momentum inherent in natural systems" is meaningful.

There is no need for by-products of landscape maintenance to result in pollution and stockpiles of unused waste. If this is assumed necessary, there is a grave misunderstanding concerning the inputs and outputs of landscape construction

and maintenance.

There is nothing noble about ugly if one has an appreciation for visual scenery. If ugly is noble, that's a value judgment that should not be fostered on a neighborhood, town, city, county or state.

Increases in capital, resource use and manpower are all part of a capitalist society. If this should be changed, then we should say so. Most Americans will not agree.

Q — Since our life styles influence our appreciation for different landscapes, how much idealism is involved in current demands for change?

A — That depends on who is making the evaluation. Certainly the issue of the landscape can be complex. But millions of people across the country come up with scores that are favorable in terms of cost/benefit ratios.

I doubt people in region are much different than in other areas. After all, many of us have migrated from one region to another.

To say that much of the urban ornamental landscape has no value for the environment is wrong, according to data from Land Grant University and Agricultural Experiment Stations. Even with almost overwhelming gloom-and-doom forecasts from the media and a variety of activists and extremists, support of quality landscapes increases yearly. The environmentalist who has a knowledge of ecology, hydrology and the soil and atmospheric sciences does not have difficulty making choices. Those who do not have these qualifications will continue to be misled.

Q — If the environmental benefits of lawns and sports turf are so

obvious and so well supported by science, why do we read in newspaper that turfgrass is an enemy?

A — Danica Kirka states in the April 9, 1990 issue of the Los Angeles Times the the city of Irvine has a new enemy, turfgrass, that is in the same classification with chlorofluorocarbons. In fact, CFC's are not believed to be the only contributor to ozone changes perhaps not even the gravest cause for concern.

Now it appears that another scapegoat may have been identified. Do city governments really need to spend this amount of time, energy and money to try to disprove the value of landscapes?

Is the need for causes so much a driving force in government today that activists and extremists espousing change command the attention of reasonable officials in

the name of unreasonable causes?

Often, all that is required is the identification of environment with some aspect of agriculture or landscape horticulture to instill suspicion, fear or even panic in many people.

At a time when we should be enjoying the benefits of science and technology as never before, we are subject to accusations that make science the enemy rather than the cure.

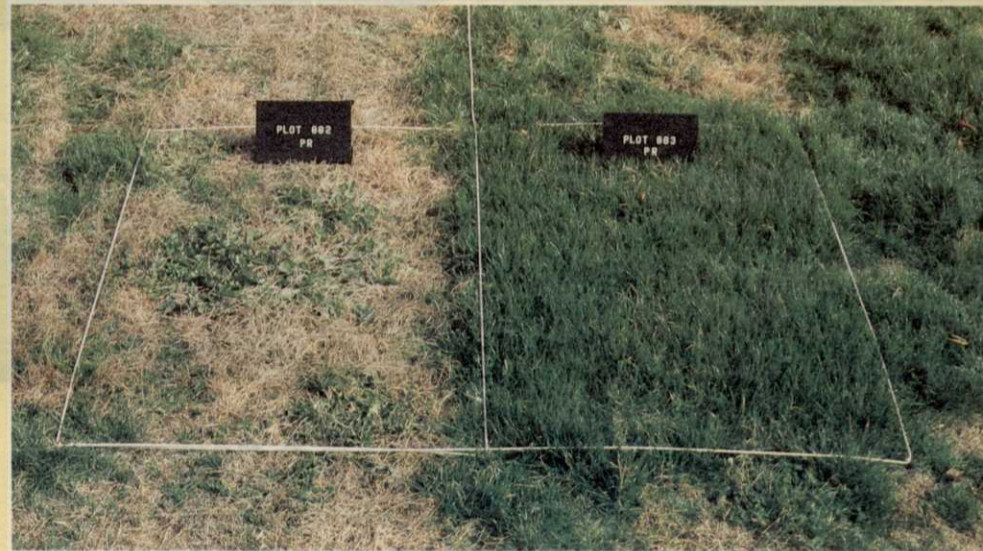
The real issue in all highly populated parts of the country is population density. The problems faced by many metropolitan areas are not those common in rural America. And, they are not likely to be solved by landscape ordinances that identify turfgrass as the new enemy.

Dr. Eliot C. Roberts, PhD, is director of The Lawn Institute in Pleasant Hill, Tenn.

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